JVC Instructions

JVC VIDSTAR VHS

Hi-Fi STEREO VIDEO CASSETTE RECORDER

HR-S7000U

S-VHS HQ

VHS INDEX ADDRESS SEARCH SYSTEM

For Customer Use:
Enter below the Serial No. which is located on the rear of the cabinet. Retain this information for future reference.

Model No. HR-S7000U

Serial No.

PU30425-918-1

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING:
TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE.

This video cassette recorder should be used with AC 120 V~, 60 Hz only.
CAUTION:
To prevent electric shocks and fire hazards, do NOT use any other power source.

CAUTION
When you are not using the HR-S7000U for a long period of time, it is recommended that you disconnect the power cord from the AC outlet.

CAUTION
TO PREVENT ELECTRIC SHOCK DO NOT USE THIS POLARIZED PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

ATTENTION:
Pour prévenir l'électrocution, ne pas utiliser cette fiche polarisée avec un prolongateur, une prise de courant ou une autre sortie de courant, sauf si les lames peuvent être insérées à fond sans en laisser aucune partie à découvert.

Note to CATV system installer:
This reminder is provided to call the CATV system installer's attention to Article 820-22 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

S-VHS

Cassettes marked "S-VHS" and "VHS" can be used with this video cassette recorder. However, S-VHS recordings are possible only with cassettes marked "S-VHS".

Thank you for purchasing the JVC HR-S7000U Super VHS Hi-Fi Stereo Video Cassette Recorder. This unit provides a breath-taking improvement in picture quality, with over 400 lines of picture resolution to double your video enjoyment. True hi-fi stereo complements the superb Super VHS pictures. In addition, a tremendous array of video features is also incorporated in the HR-S7000U. Learn about all the available features listed in full on the following page and take advantage of them for your total audio-visual enjoyment.

Before using this video recorder, read this instruction booklet carefully so that you will obtain the best results from your HR-S7000U.

NOTE: The rating plate and the safety caution are on the rear of the unit.

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FEATURES

S-VHS: A new dimension in video

- S-VHS is a format, newly developed for the age of visual information, with technologies of further improved resolution and for higher picture quality.
- S-VHS realizes improved pictures of revolutionary quality with a horizontal resolution of more than 400 lines, when used in combination with newly developed, high-performance S-VHS cassettes.
- S-VHS recorders also record and play back conventional VHS video cassettes.
- Separated Y/C (luminance/chrominance) terminals for higher picture quality.

HQ System for VHS mode

- HQ (High Quality) System composed of a luminance signal noise reduction circuit (YNR), chrominance signal noise reduction circuit (CNR), detail enhancer (DE) and a higher white clip level, for producing better VHS pictures.
- Luminance signal comb filter for improved resolution.
- Edit switch provided for the HQ circuitry for making better dubbings.

Consistent picture quality in all modes

- Super Double-Azimuth 4-head (Super DA-4) system for optimum performance in both EP and SP modes.
- Noiseless field stills, with frame advance capability.
- Noiseless slow-motion playback at variable speeds.
- Improved search picture quality.

Hi-Fi stereo sound

- Conforms to the Hi-Fi VHS standard for superlative stereo sound with a dynamic range of more than 90 dB.
- New switching noise reduction system for cleaner-than-ever high-fidelity sound reproduction.
- Peak-hold audio level indicators/Hi-Fi tracking meter.
- Hi-Fi recording level control with ALC switch.

Advanced digital search features

- VHS Index Search System, based on the standardized CTL coding system for VHS, facilitates location of the beginning of each recording or any specified point on the tape.
  - Automatic marking of the beginnings of new recordings with index codes.
  - Manual marking or erasing of index codes.
  - Detection of index codes in the Shuttle Search or FF (REW) mode for automatic start of playback.
- VHS Address Search System, based on the standardized CTL coding system for VHS, allows marking 4-digit numbers (address codes) on the tape for numerical identification of any point.
  - Automatic marking of the tape with address codes at one-minute intervals (0 to 9999).
  - Manual marking or erasing of address codes.
  - Renumbering of already-recorded address codes.
  - Detection of address codes in the Shuttle Search or FF (REW) mode for automatic start of playback.
- Counter go-to function permits direct access to a counter-specified point with the remote control's 10-digit keypad.
- Counter memory for returning to a designated point on a tape.

Automatic functions

- Auto play function: insert a cassette (with safety tab removed), and playback will start automatically.
- Memory play function for automatic start of playback after rewind to the beginning of the tape or after rewind/fast forward to the counter reading of "0000".
- Auto power-on.
- Power-off ejection.
- Automatic rewind at the end of tape.
- Automatic backspace editing for clean assembled edits.

Other value features

- On-screen display for remote timer programming.
- On-screen display for mode check: called up either automatically or manually.
- Built-in MTS decoder for direct recording of stereo and SAP programs.
- 181-Channel cable-compatible frequency synthesized tuner.
- Favorite channel programming capability with skip/store function.
- 14-Day/8-event 10-key programmable timer with SP/EP programming.
- 10-Minute memory backup for clock and timer settings.
- 10-Key random-access channel selection and up/down channel scanning.
- TV remote control: remote can control on/off, volume and channel selection of designated JVC TV sets.
- Switchable AC outlet to timer-control a connected source component.
- FM simulcast recording: allows independent TV and audio programming on the same cassette.
- Shuttle search at 7 times normal speed.
- Audio limiter circuit built in.
- Instant recording function with auto shut-off.
- Comprehensive fluorescent display with symbolic mode indicators.
- Remaining tape time indicator.
- Picture sharpness control.
- Headphone jack and headphone level control.
- A set of audio and video inputs provided on the front panel for editing convenience.

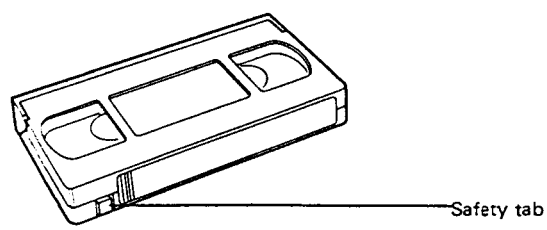
PRECAUTIONS

Handling and storage

- Avoid using the recorder under the following conditions:
  - extremely hot, cold or humid places,
  - dusty places,
  - near appliances generating strong magnetic fields,
  - places subject to vibrations, and
  - poorly ventilated places.
- Be careful of moisture condensation.
  Avoid using the recorder immediately after moving from a cold place to a warm place or soon after heating a room which was cold. The water vapor in warm air will condense on the still-cold video head drum and tape guides and may cause damage to the tape and the recorder.
- Handle the recorder carefully.
  - Do not block the ventilation openings.
  - Do not place anything heavy on the recorder.
  - Do not place anything which might spill and cause trouble on the top cover of the recorder.
  - Use in horizontal (flat) position only.
- In case of transportation,
  - Avoid violent shocks to the recorder during packing and transportation.
  - Before packing, be sure to remove the cassette from the recorder.

Video cassettes

- This recorder employs S-VHS and VHS cassettes only.
  S-VHS: ST-120 for 120(SP)/360(EP) minutes, ST-60 for 60/180 minutes and ST-30 for 30/90 minutes of recording.
  VHS: T-160 for 160(SP)/480(EP) minutes, T-120 for 120/360 minutes, T-90 for 90/270 minutes, T-60 for 60/180 minutes and T-30 for 30/90 minutes of recording.
- Video cassettes are equipped with a safety tab to prevent accidental erasure. When the tab is removed, recording cannot be performed. If you wish to record on a cassette whose tab has already been removed, use adhesive tape to block the hole.



- Avoid exposing the cassettes to direct sunlight. Keep them away from heaters.
- Avoid extreme humidity, violent vibrations or shocks, strong magnetic fields (near a motor, transformer or magnet) and dusty places.
- Place the cassettes in cassette cases and position vertically.

Moisture condensation

- If you pour a cold liquid into a glass, water vapor in the air will condense on the surface of the glass. This is called moisture condensation.
- Moisture condensation on the head drum, one of the most crucial parts of the video recorder, will cause damage to the tape.
- Moisture in the air will condense on the recorder when you move it from a cold place to a warm place, after heating a cold room or under extremely humid conditions.
- This recorder is equipped with a moisture condensation prevention circuit which automatically heats the head drum according to the ambient temperature. This circuit operates only when the unit is plugged into an AC outlet.
- The moisture condensation prevention circuit consumes only a slight amount of power. However, if for some reason you are not using the recorder for a long period of time, it is advisable to remove the power cord from the AC outlet.
- Since the moisture condensation prevention circuit cannot evaporate existing moisture condensation immediately after the power cord has been plugged into the AC outlet, you must allow for a few hours if the recorder is to be used in such areas as would occasion moisture condensation.

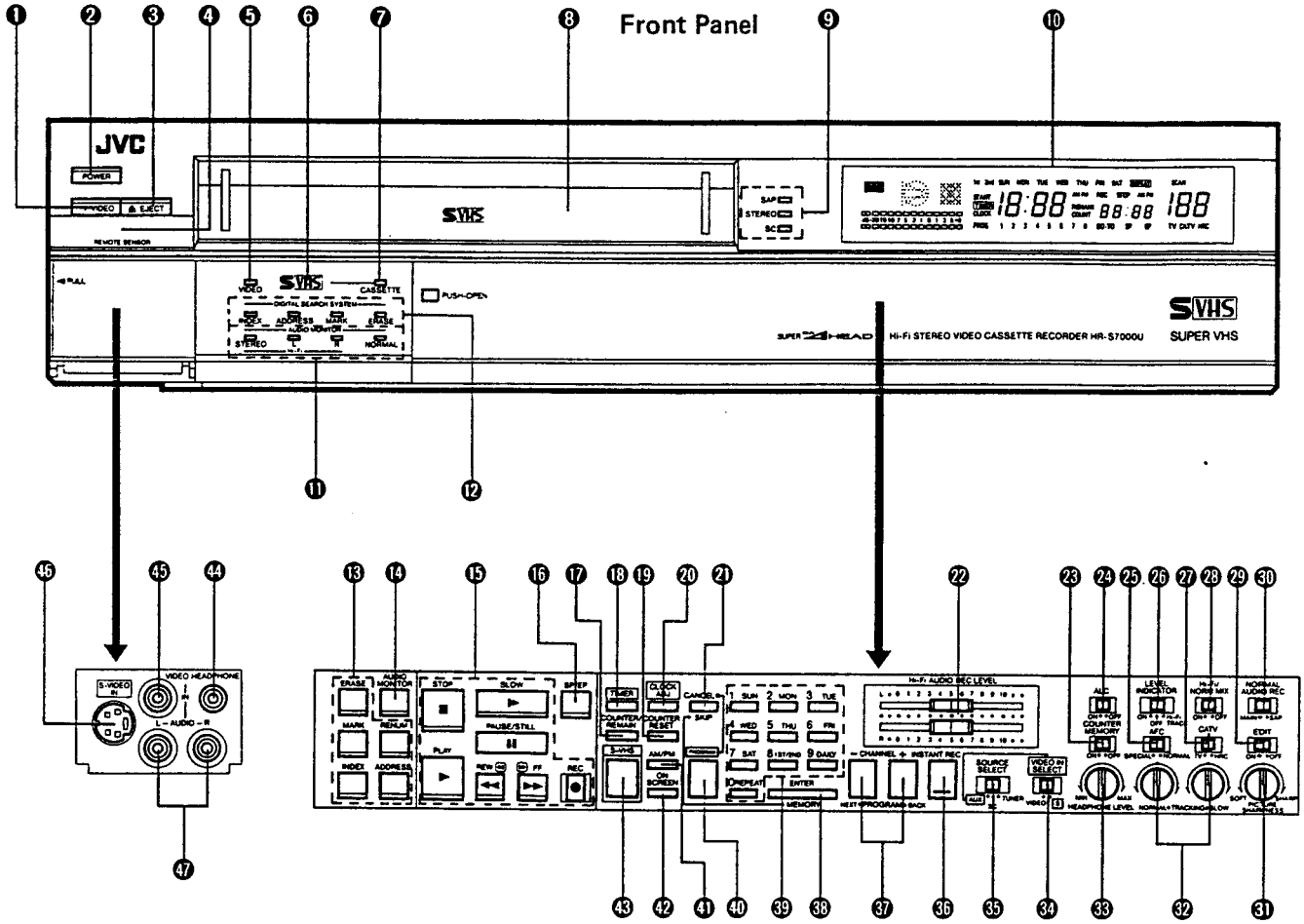
Operation

- When a cassette is loaded, the power is switched on automatically.
- The cassette can be unloaded even when the power is off. Pressing the EJECT button turns the power on and, after ejection of the cassette, shuts it off automatically in this case.
- As long as the TIMER button is engaged with the TIMER indicator lit, the POWER and EJECT buttons have no effect and unloading of a cassette is not possible. If a cassette has not yet been inserted, simply insert a cassette; the power will be switched on to load the cassette properly and, after completion of automatic loading, the Timer Recording Standby mode will be engaged with power off.

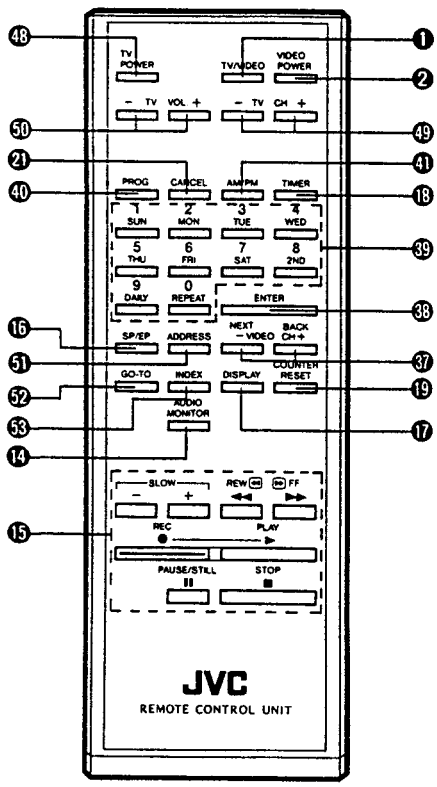
Remote control unit

- Avoid violent shocks, especially take care not to drop the unit.
- Take care not to allow liquid to spill into the unit or dampen the terminals.
- Do not place heavy objects on the unit.
- Avoid leaving the unit in places subject to direct sunlight or extremely high temperatures.

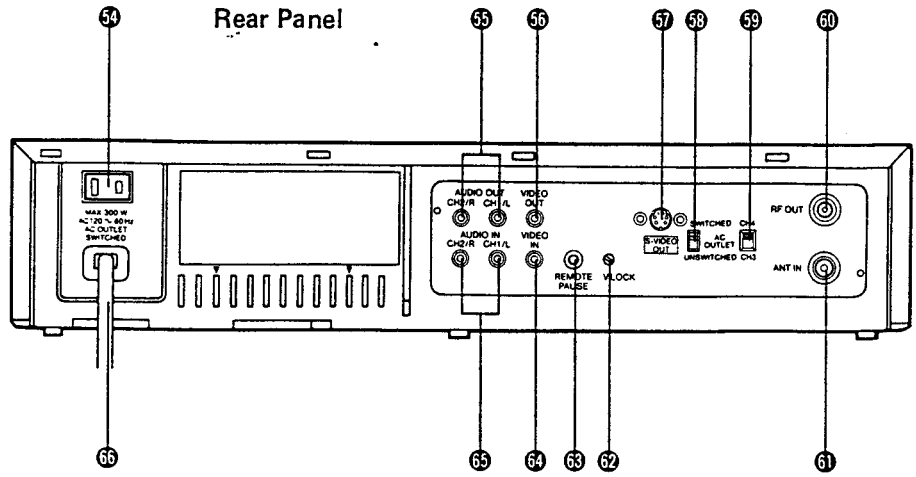
CONTROLS, INDICATORS AND CONNECTORS



Remote Control Unit



Rear Panel



Front Panel

❶ TV/VIDEO button
Selects between TV and VIDEO modes.
TV mode (with the VIDEO indicator ❺ off): for TV viewing and for watching one TV program while recording another.
VIDEO mode (with the VIDEO indicator on): for recording a TV program while watching it and for playing back recorded tapes. When the power is switched on, initially the TV mode is engaged. If you want to change the mode, press the TV/VIDEO button.

❷ POWER button with green indicator
Press to apply power to the HR-S7000U for recording or playback. The indicator will light. Loading a cassette also turns the power on.

❸ Cassette EJECT button

❹ Infrared beam receiving window (REMOTE SENSOR)

❺ VIDEO mode indicator (See ❶ above.)

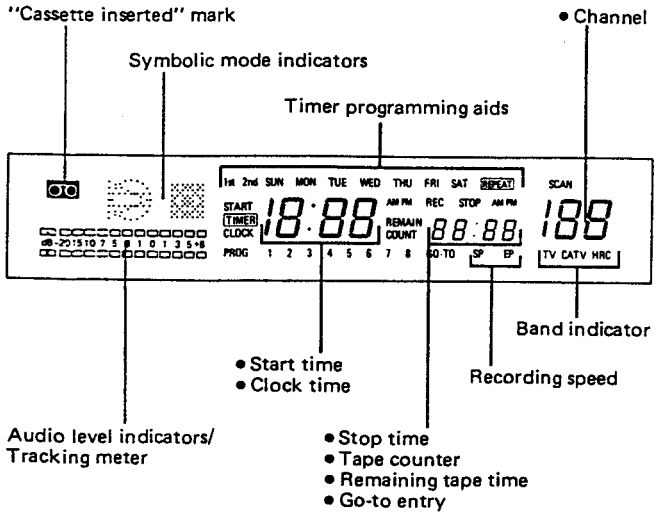
❻ S-VHS mode indicator
The "S-VHS" indicator illuminates when the S-VHS recording mode is selected with the S-VHS mode select button ㊸ or when S-VHS recordings are being played back. In playback, S-VHS recordings are automatically detected and played back in the S-VHS mode.

❼ S-VHS CASSETTE indicator
This LED lights when a cassette marked S-VHS is inserted, with the cassette mark also appearing on the fluorescent display (FDP). With a regular VHS cassette, only the cassette mark on the FDP lights.

❽ Cassette loading slot
Insert an S-VHS or VHS cassette. The door will close and the S-VHS cassette indicator ❼ and/or the cassette mark on the FDP will illuminate to show which type of cassette has been inserted.

❾ Audio program indicators
SAP: Lights when a TV program accompanied by a second audio program is being received.
STEREO: Lights when a stereophonic program is being received.
SC: Lights when the SOURCE SELECT switch ㉟ is set to SC.

❿ Comprehensive fluorescent display (FDP)
Fully explained in relevant sections.



⓫ AUDIO MONITOR indicators
An indicator corresponding to the soundtrack selected with the AUDIO MONITOR button ⓮ and the Hi-Fi/NORM MIX switch ㉘ will light. See page 18.

⓬ DIGITAL SEARCH SYSTEM indicators
INDEX: Lights in the Index Search mode.
ADDRESS: Lights in the Address Search mode.
MARK: Lights when an index or address code is being marked.
ERASE: Blinks when an index or address code is being erased.
(See pages 25 and 26.)

⓭ Digital search system control buttons
INDEX: Press to engage the Index Search mode.
ADDRESS: Press to engage the Address Search mode.
MARK: Press during playback or recording to record an index or address code onto the tape.
ERASE: Press during playback to erase an index or address code.
RENUM: Press to renumber already-recorded address codes.
See pages 25 and 26.

⓮ AUDIO MONITOR button
Press to select the audio output. Each time the button is pressed, the soundtrack to be output changes (Hi-Fi STEREO, Hi-Fi L, Hi-Fi R, and NORMAL), if the Hi-Fi/NORM MIX switch ㉘ is set to OFF. If this switch is ON, the selected Hi-Fi soundtrack is mixed with the normal audio soundtrack. The selected output is indicated by the AUDIO MONITOR indicators ⓫.

⓯ Tape control buttons
- **STOP button**
  To stop the tape.
- **PLAY button**
  To play back a tape, or to cancel the Pause/Still, Slow, or Search mode. To start recording, press this button together with the REC button.
- **SLOW button**
  Press while in the Play mode to engage the Slow-Motion mode. Then, to increase the speed, press the "+" side; to decrease the speed, press the "–" side.
- **PAUSE/STILL button**
  Press to stop the tape temporarily to avoid recording of unwanted material or to view a still picture. The still picture can be advanced each time this button is pressed.
- **REW·SHUTTLE SEARCH button**
  To rewind the tape, press this button while in the Stop mode. To view the speeded-up picture in the reverse direction, hold this button pressed while in the Play mode.
- **FF SHUTTLE SEARCH button**
  To fast forward the tape, press this button while in the Stop mode. To view the speeded-up picture in the forward direction, hold this button pressed while in the Play mode.
- **REC button**
  Press together with the PLAY button for recording.

⑯ **SP/EP button**
Set to SP ("SP" lights on the FDP) when you wish recordings to be made in the SP (Standard Play) mode. When you wish to record longer TV shows, or for unattended and prolonged recording of a number of TV shows with a combined time of up to 8 hours (with a T-160 cassette), set this button to EP (Extended Play); the EP indicator lights on the FDP. The recording mode can be programmed independently for each preset program for timer recording.

⑰ **COUNTER/REMAIN button (DISPLAY on remote control)**
Press to switch the smaller 4-digit display from tape counter to remaining tape time display, or vice versa.

⑱ **TIMER button**
Press to engage the Timer Recording Standby mode after you have preset the timer for unattended recording.

⑲ **COUNTER RESET button**

⑳ **CLOCK ADJ. button**
Press for clock setting.

㉑ **CANCEL/SKIP button**
For cancelling programmed data, or skipping unnecessary channels.

㉒ **Hi-Fi AUDIO REC LEVEL controls**
See page 17.

㉓ **COUNTER MEMORY switch**
When this switch is set to ON the tape will stop automatically at the counter reading of about "0000" in the Rewind or Fast Forward mode.

㉔ **ALC switch**
Set to ON to activate the automatic level control, circuit for hi-fi audio. For manual control of the hi-fi audio recording level, set this switch to OFF and use the AUDIO Hi-Fi REC LEVEL controls ㉒ for adjustment.

㉕ **AFC switch**
Normally set this switch to NORMAL. If no picture appears, reset the switch to SPECIAL.

㉖ **LEVEL INDICATOR switch**
Selects the function of the audio level indicators. See page 17.

㉗ **Band select switch**
TV position: If your antenna system is regular broadcast VHF/UHF, VHF only or UHF only, set to this position.
CATV position: If your antenna system is a Cable TV line with or without a CATV channel converter/decoder unit, set to this position.
HRC position: If your antenna system is an HRC (Harmonic Related Carrier) line, set to this position.

㉘ **Hi-Fi/NORM MIX switch**
To obtain the mixed audio output from both the hi-fi and normal audio tracks.

㉙ **EDIT switch**
Normally set to OFF. For making multi-generation dubs of conventional VHS tapes, set it to the ON position. (See page 33.)

㉚ **NORMAL AUDIO REC switch**
Selects the audio program to be recorded on the normal audio track when recording a broadcast accompanied by two audio programs. See page 15.

㉛ **PICTURE SHARPNESS control**
Turn this knob clockwise to make the picture sharper. Turn counterclockwise to give the picture a softer tone. Effective only for playback pictures.

㉜ **TRACKING controls (NORMAL/SLOW)**
Use these controls to eliminate noise bars, if observed, during normal or special-effects playback. Hi-Fi tracking can also be adjusted with the NORMAL TRACKING control. See page 17.

㉝ **HEADPHONE LEVEL control**
Adjusts the level of the audio output from the HEADPHONE jack ㊹.

㉞ **VIDEO IN SELECT switch**
When the SOURCE SELECT switch ㉟ is set to AUX, set this VIDEO IN SELECT switch according to the source connection.
VIDEO: Set to this position when recording a source connected to the VIDEO IN connector.
S: Set to this position when recording a source connected to the S-VIDEO IN connector ㊻ (which accepts separated luminance and chrominance signals).

㉟ **SOURCE SELECT switch**
For selecting the recording input signal.
AUX: To record signals from an external source. (Also set the VIDEO IN SELECT switch ㉞ as required.)
SC: To record the video signal and normal audio signal from the built-in tuner and the hi-fi audio signal from the AUDIO IN connectors. When recording FM simulcast TV programs, use this position.
TUNER: To record signals from the built-in tuner.

㊱ **INSTANT REC button**
Use this button to start recording instantly and stop automatically after a predetermined time.

㊲ **CHANNEL -/+ buttons (PROGRAM NEXT/BACK)**
Press to quickly review channels. These buttons can also be used as cursor keys in the Timer Set mode.

㊳ **ENTER button**
Channel selection: Page 13.
Clock setting: Page 19. (Recorder only)
Channel restoring: Page 14. (Recorder only)
Timer programming: Page 30.
On-screen display: Page 20. (Remote control only)

㊴ **Multi-purpose numeric keys**
Channel selection: Page 13.
Clock setting: Page 19. (Recorder only)
Timer programming: Page 30.
Index search: Page 25.
Address search: Page 26.
Counter go-to: Page 27.

㊵ **PROGRAM button (PROG. on remote control)**
Use to preset the timer for unattended recording.

㊶ AM/PM button
Press to specify AM or PM in clock or timer setting.

㊷ ON SCREEN button
Press to call up a mode indication on the TV screen; the engaged mode will appear together with the channel and clock time, and disappear automatically after 5 seconds. On-screen mode check is also available automatically when the corresponding controls are operated. See page 20.
This button is also used to engage the on-screen timer set mode. See page 29.

㊸ S-VHS mode select button
This button switches between S-VHS and VHS recording modes. When the S-VHS mode is selected, the S-VHS indicator ❻ illuminates. S-VHS recordings are possible only when S-VHS cassettes are used in the S-VHS recording mode.

㊹ HEADPHONE jack
Connect a set of headphones for monitoring or private listening.

㊺ VIDEO IN connector
Connect the video output of other video equipment for editing.
This front panel VIDEO IN connector is in parallel with the rear panel VIDEO IN connector, and has priority over it.

㊻ S-VIDEO IN connector
This is a special connector (4-pin) to accept separated luminance and chrominance signals. To record this type of video signal, connect an appropriate source to this terminal using the provided video cable. Use the AUDIO IN connectors for making audio signal connections. When recording from this connector, set the VIDEO IN SELECT switch ㉞ to S.

㊼ AUDIO IN connectors (L/R)
Connect the audio output of other video equipment for editing, or an audio source to be recorded together with video programming.
These connectors have priority over the rear panel AUDIO IN terminals ㊺.

Remote Control Unit

The infrared remote control unit gives you full operation control from your viewing position. All control buttons, except those separately explained, have the same function as the corresponding buttons on the recorder. The maximum operating distance is about 8 m (26 ft).

Remote Control Unit

A/B mode switching
A switch on the back of the remote control labelled A/B is accessible when the battery compartment cover is removed.
- This switch is preset to the "A" position. Do not touch it unless you use two JVC video decks side by side.
- When you place two JVC video decks near each other, use this remote control in the "B" mode to prevent both decks from responding simultaneously to this remote control's signals. For this purpose, carefully follow the instructions below:

(1) Unplug the power cord of the HR-S7000U from the AC outlet.
(2) Set the remote control unit's A/B mode switch to "B".
(3) Plug the power cord of the HR-S7000U into the AC outlet.
(4) Turn on the power of the HR-S7000U using the remote control's VIDEO POWER button ❷.
- The HR-S7000U "memorizes" this B code and then will respond only to the signals of this remote control unit. The other deck will respond only to its remote control.

Note:
Do not operate other remote controls after you have plugged the HR-S7000U into the AC outlet and before you press the VIDEO POWER button of this remote control.

㊽ TV POWER button
Press to turn the TV power on or off. (Designated TV models only.)

㊾ TV CH -/+ buttons
Press to scan to a desired channel on the TV receiver.

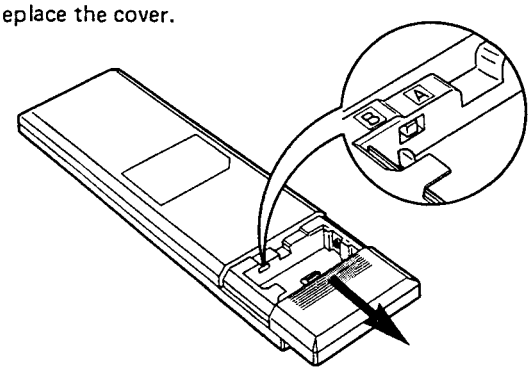
㊿ TV VOL. -/+ buttons
Press "–" or "+" to decrease or increase the TV's sound volume.

(51) ADDRESS button
Press to engage the Address Search mode. (See page 26.)
Manual mark/erase functions are not provided on the remote control.

(52) GO-TO button
Press to engage the counter Go-To mode. (See page 27.)

(53) INDEX button
Press to engage the Index Search mode. (See page 25.)
Manual mark/erase functions are not provided on the remote control.

Installing the batteries
1. Slide the battery compartment cover on the rear of the unit in the direction of the arrow (►).
2. Insert 2 "AAA"-size batteries (provided) in the correct directions into the battery compartment.
3. Replace the cover.



Rear Panel

㊹ AC OUTLET
Connect the power cord of other audio or video equipment (such as an FM tuner) requiring less than 300 watts of power. The power flow through this outlet is controlled by the AC OUTLET switch ㊽.

㊺ AUDIO OUT terminals (CH2/R and CH1/L)
Connect to the AUDIO IN terminals of another video recorder for tape-to-tape transfer, or the AUDIO IN terminals of a video monitor for playback.

㊻ VIDEO OUT terminal
Connect to the VIDEO IN terminal of another video recorder for tape-to-tape transfer, or the VIDEO IN terminal of a video monitor for playback. (This terminal accommodates the ordinary video signal = composite video signal.)

㊼ S-VIDEO OUT terminal
This is a special connector (4-pin) to deliver separated luminance and chrominance signals. For tape-to-tape transfer of S-VHS recordings, connect this terminal to the S-VIDEO IN terminal of a 2nd S-VHS video recorder using the provided video cable. Or connect to the same type of connector of a television or monitor equipped with an S-VIDEO input terminal. In these cases, use the AUDIO OUT terminals ㊺ for making audio connections.

㊽ AC OUTLET switch
SWITCHED: Power flows through the AC OUTLET ㊹ only when the recorder is on. When used in combination with the built-in timer, this enables timer-controlled power supply for the connected equipment.
UNSWITCHED: Power flows through the AC OUTLET regardless of whether the recorder is on or off.

㊾ RF output channel select switch
See "VIDEO CHANNEL SETTING" on page 12.

㊿ RF OUT terminal
Connect to the antenna input connector (female F) of a TV receiver using the antenna cable (provided). If your TV receiver has separate VHF/UHF 300-ohm antenna terminals only, use the antenna splitter (provided).

(61) ANT IN terminal
Connect the antenna cable or a Cable TV Line. If necessary, use the matching transformer (provided).

(62) V. LOCK adjustment screw
When operating in the Still mode, adjust this screw by using a screwdriver to eliminate any vertical vibration of the picture.

(63) REMOTE PAUSE terminal
When using a JVC video camera, connect the remote control cable of the camera adapter to this terminal for the purpose of controlling the starting and stopping of the tape with the camera's start/stop switch.

(64) VIDEO IN terminal
Connect to the VIDEO OUT terminal of another video recorder for tape-to-tape transfer, or the VIDEO OUT terminal of the camera adapter for camera recording.

(65) AUDIO IN terminals (CH2/R and CH1/L)
Connect to the AUDIO OUT terminals of another video recorder for tape-to-tape transfer, or the AUDIO OUT terminals of the camera adapter for camera recording.

(66) AC power cord
Connect to an AC 120 V∿, 60 Hz household outlet.

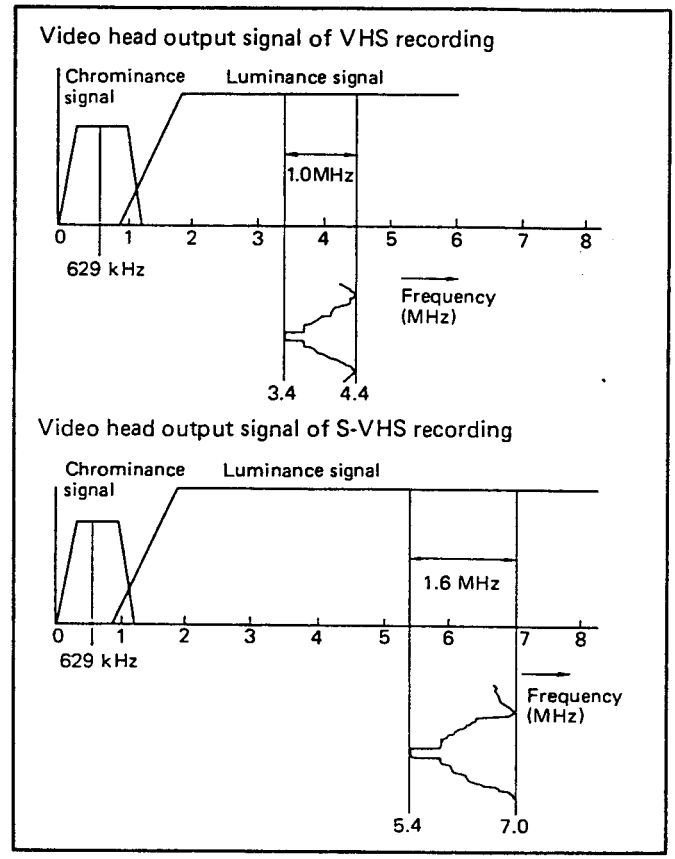
FOR A BETTER UNDERSTANDING OF S-VHS AND VHS

S-VHS vs. VHS

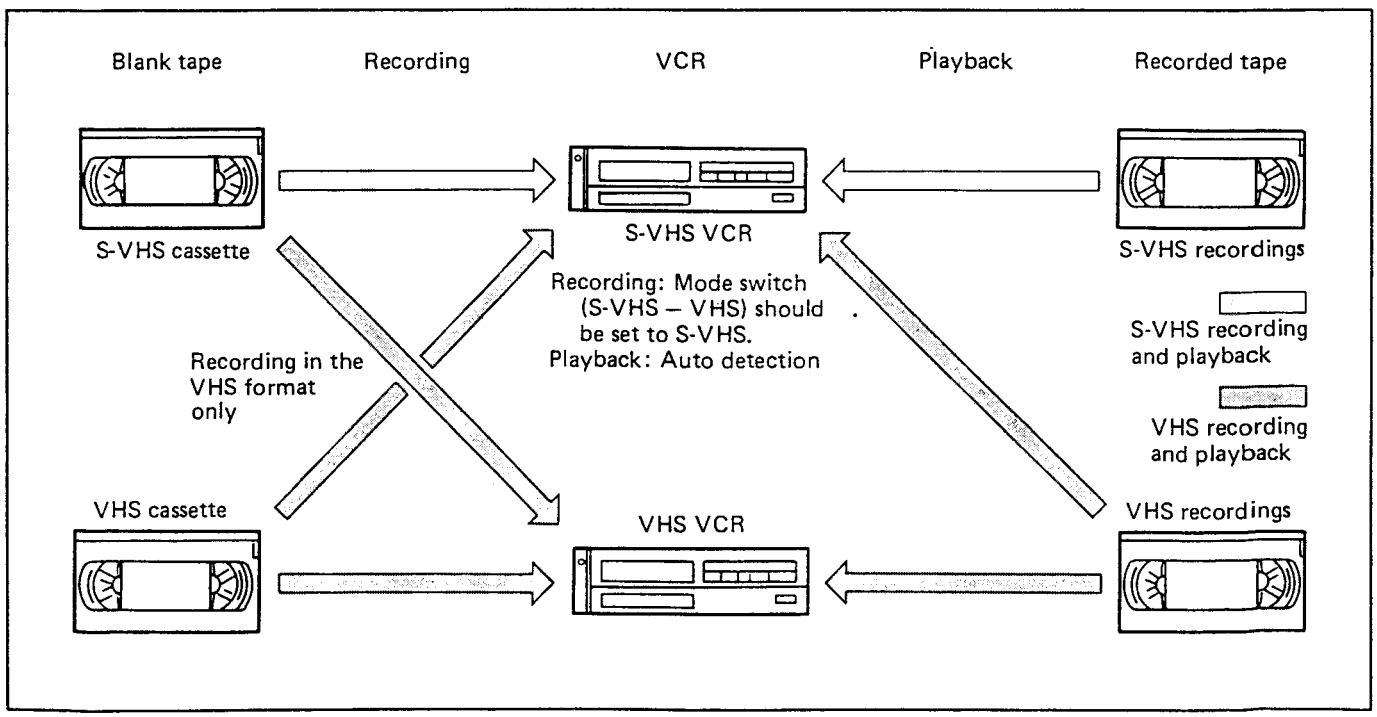
- VHS is the world's most popular video format. If you owned a VCR before the HR-S7000U, most likely it was a VHS machine.
- **S-VHS is a new video sub-format based on VHS. It offers superior picture quality with a horizontal resolution of more than 400 lines by shifting the FM carrier frequency of the luminance signal from the conventional 3.4 – 4.4 MHz range to a higher one of 5.4 to 7 MHz.**

- The HR-S7000U is equipped for recording and playback in both the S-VHS and VHS formats. Therefore, you can still play back your VHS software programs and previously recorded family recordings.
- You can switch to the world of S-VHS for your new recordings to enjoy breath-taking picture quality. Or to exchange recordings with someone whose VCR is not S-VHS, simply record in the VHS mode, whether with a regular VHS cassette or an S-VHS cassette.

Recording Signal Spectrum

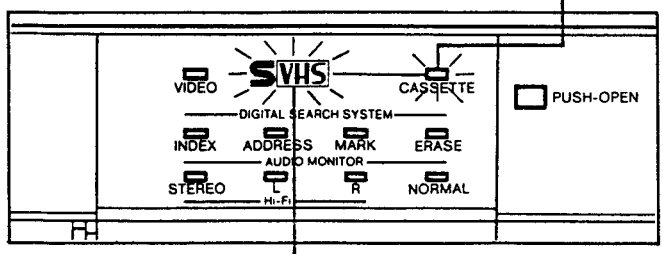


Compatibility between S-VHS and VHS

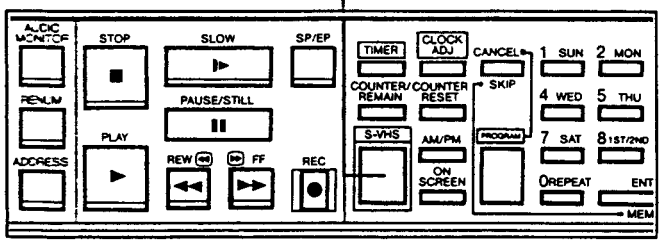


S-VHS Recording

Insert an S-VHS cassette: this indicator will light.

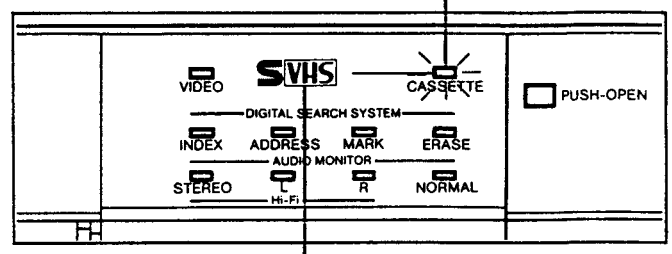


Press the S-VHS button: this indicator will light.



S-VHS Playback

Simply insert a recorded S-VHS cassette: this indicator will light.



When playback starts, this indicator will light automatically.

How to take best advantage of S-VHS pictures

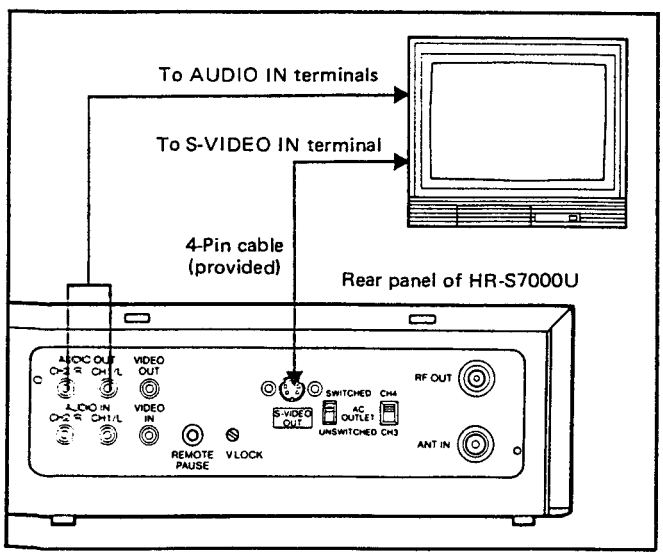
For flexibility, the HR-S7000U offers two sets of input/output terminals: one for the regular composite video signal in which the luminance (Y) and chrominance (C) signals are mixed together, and the other for the separated Y/C signals.

No special connections are necessary to record and play back broadcast programs. Simply follow the connecting instructions on the next page.

Using a television with S-VIDEO input

If your television is equipped with an S-VIDEO input (separated Y/C signals) terminal, this is an ideal way to enjoy the best possible S-VHS picture, because no interference occurs between the luminance and chrominance signals.

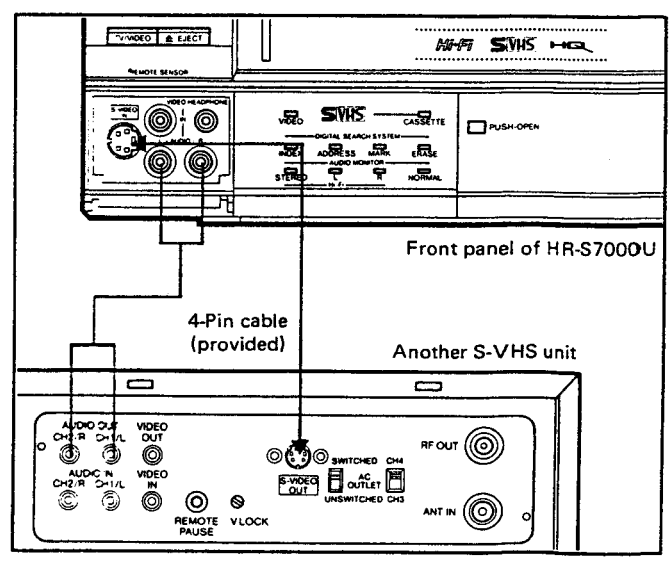
Connect the S-VIDEO OUT terminal of the HR-S7000U to the S-VIDEO IN terminal of your television. To view video cassettes with this setup, set the TV to the AV mode. (It is not necessary to set the TV to channel 3 or 4.)



Recording from other S-VHS equipment

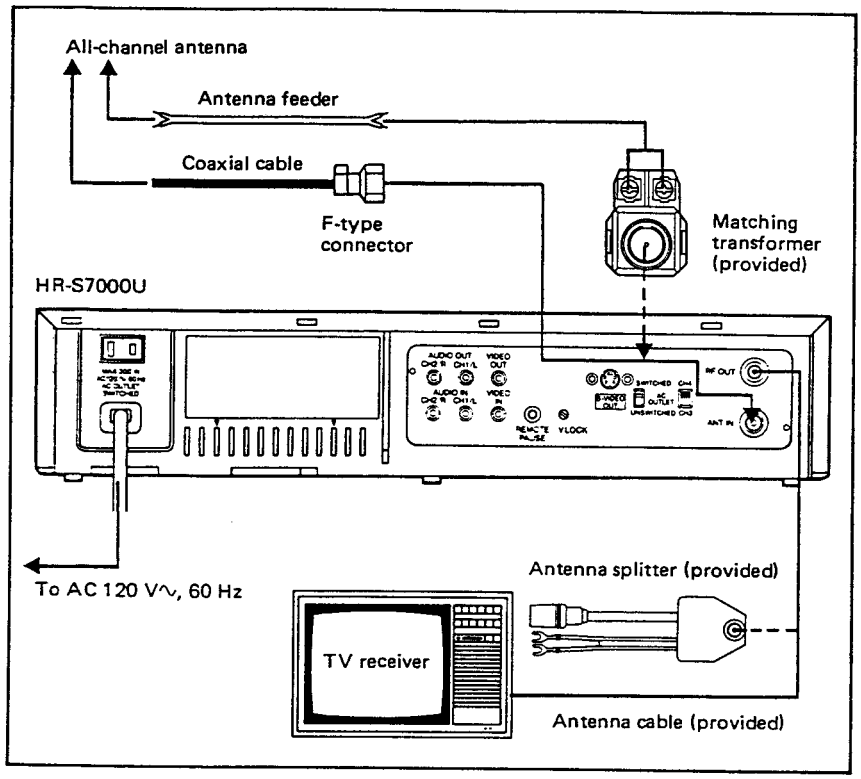
For recording sources which deliver separated Y/C signals, use the front panel S-VIDEO IN connector and proceed as follows:

1. Insert an S-VHS cassette.
2. Switch to the S-VHS mode.
3. Set the SOURCE SELECT switch to AUX.
4. Set the VIDEO IN SELECT switch to S.



CONNECTIONS

TO VHF AND UHF ANTENNAS



Procedure

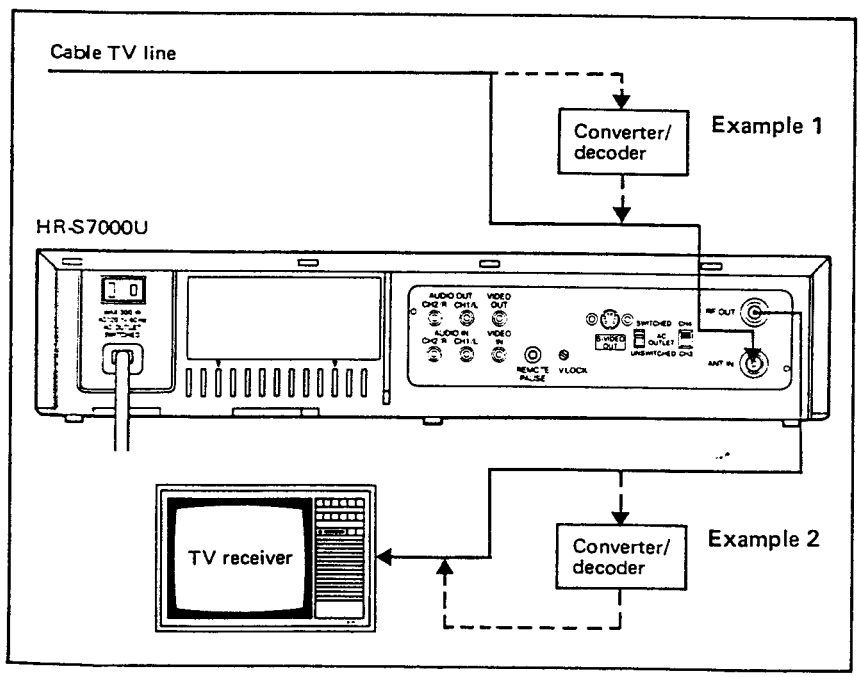
- Remove the antenna cable from the TV receiver and reconnect to the HR-S7000U's ANT IN connector as illustrated. The HR-S7000U is now ready to record off-air programs.

  Notes:

  - If your antenna cable is a 300-ohm flat feeder, use the provided matching transformer.
  - If your antenna system has separate VHF/UHF lead-in wires, use an antenna mixer and connect its output to the HR-S7000U's ANT IN connector, either directly or through the provided matching transformer depending on the type of the mixer.
- Connect the HR-S7000U to the TV receiver using the 75-ohm antenna cable (provided).

  Note: If your TV is equipped with 300-ohm UHF input terminals and a 75-ohm VHF input terminal, use the antenna splitter (provided) to complete connection.

TO CABLE TV LINE



Example 1

- You can record any scrambled cable TV channel while watching it.
- Select the recording channel on the converter/decoder.
- Set the recorder to the output channel of the converter/decoder (channel 3 or 4).
- Set the TV receiver to channel 3 or 4.
- Set the TV/VIDEO button on the recorder to VIDEO. (The VIDEO indicator on the FDP will light.)

Example 2

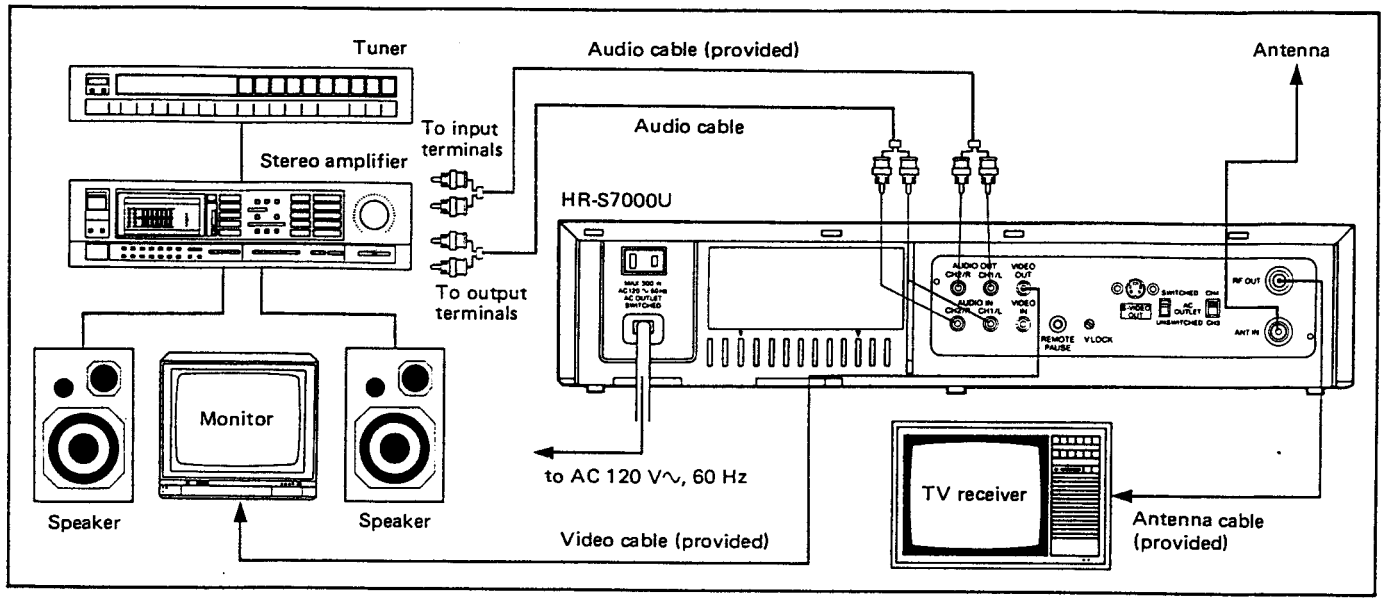
- You can record any non-scrambled cable TV channel while watching it or any other channel including "scrambled signal" channels.

  Note: "Scrambled signal" channels cannot be recorded.
- Select with the recorder the channel to be recorded.
- Select with the converter/decoder the channel to be viewed.
- Set the TV receiver to the output channel of the converter/decoder (channel 3 or 4).
- Set the TV/VIDEO button as necessary.

Note:

If your cable TV system does not require a converter/decoder for scrambled signals, you can use the cable-compatible tuner built into the HR-S7000U for viewing and recording. In this case, simply connect the cable TV line to the ANT IN terminal of the recorder and the RF OUT terminal of the recorder to your TV receiver. Please contact your cable TV company for any questions concerning hookups or cable TV operation.

TO A STEREO SYSTEM



Procedure

- Connect the AUDIO IN CH1/L and CH2/R connectors of the HR-S7000U to the recording output terminals of the amplifier. (Exactly as one hooks up an audio cassette deck.)
- Connect the AUDIO OUT CH1/L and CH2/R connectors of the HR-S7000U to the AUX IN or TAPE MONITOR terminals of the amplifier.

Application

- With this setup, you can enjoy prerecorded Hi-Fi VHS tapes in stereo while viewing them on a regular TV receiver, and also you can record FM simulcast television programs with hi-fi audio accompaniment. See page 22.
- You can also record only audio (without recording any video signal) on both hi-fi and longitudinal audio tracks. This means you can record a continuous 8-hour FM program onto a single cassette (T-160 VHS cassette). See page 22.
- If you want to timer-control the recording of FM simulcast programs, connect the tuner's power cord to the HR-S7000U's AC outlet. Set the AC OUTLET switch to SWITCHED and the tuner's power switch to ON. Both the tuner and the HR-S7000U will be switched on at a time preprogrammed by the HR-S7000U. Timer-controlled recording of FM simulcast programs is not possible with the type of tuners which reset the channel each time the power is switched off.

CAUTION:

- The HR-S7000U has a dynamic range of more than 90 dB in the hi-fi audio mode. It is recommended that you check the maximum level if you are going to listen to the hi-fi audio signals through a stereo amplifier. A sudden surge in speaker input may cause speaker damage.
- Some speakers and televisions are specially shielded to prevent television interference. If neither are shielded, do not place the speakers adjacent to the TV set, otherwise the video playback picture will have interference.

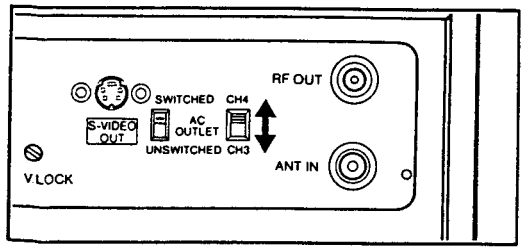
Note:

- If the front panel AUDIO input connectors are occupied, the rear panel AUDIO IN connectors will not accept signals.

VIDEO CHANNEL SETTING

The built-in RF converter permits playback of video and audio recordings through a TV receiver.
The signals from the RF converter are viewed through a vacant channel not used for broadcasting in your viewing area.

(Rear)



The converter channel of all units is set to 3 prior to shipment from the plant. Reset the channel to 4 in areas where channel 3 is employed for broadcasting.

For this purpose, slide the channel select switch on the rear of the unit to CH 4.

This is YOUR video channel. To view video cassettes, always set the TV channel selector to either channel 3 or 4.

OPERATING THE BUILT-IN TUNER

The HR-S7000U incorporates an advanced frequency synthesized tuner which is pretuned to VHF channels 2 through 13, UHF channels 14 through 69 and 113 (excluding 12 VHF broadcasts) cable TV channels* (including mid, super, hyper and ultra bands). There is no need to preset the tuner; it automatically receives the broadcast corresponding to the channel number displayed.

*In Canada: 110 (excluding 12 VHF broadcasts) cable TV channel capability.

Note: If the picture is not clear, perform fine tuning on your television.

Stored and skipped channels

A total of 181 channels are receivable. However, to prevent the tuner from scanning all the frequencies to reach your desired station, some channels are skipped. It is possible to restore the skipped channels whenever necessary. Also, it is possible to skip more channels if there are no broadcasts on those channels in your area.

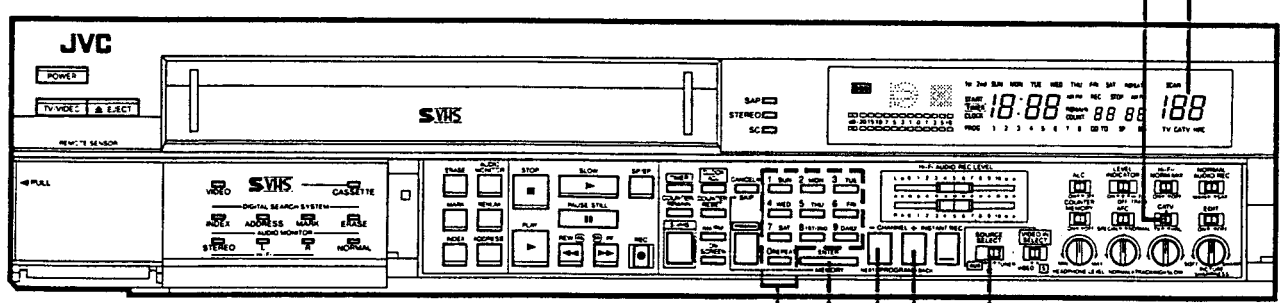
Prior to shipment, the following channels are stored for instant tuning.

BAND switch setting	Channels
CATV	VHF 2 through 13 CATV 14, 18, 23, 29, 36, 48, 49
TV	VHF 2 through 13 UHF 14, 15, 17, 18, 20, 22, 23, 25, 27, 29, 30, 32, 35, 36, 40, 44, 48, 49

Band select switch

TV: To receive VHF/UHF channels
CATV: To receive cable TV channels
HRC: To receive HRC cable channels

Channel display



Set to TUNER.

Selecting channels

1. To select a channel, simply press the numeric keys. The channel number selected will appear on the display; the channel will change automatically within 2 to 3 seconds after the last numeric key is pressed.
2. To change channels immediately, press the ENTER button after pressing the numeric keys.

Scanning channels

Channels can be "called up" in ascending or descending order by using the CHANNEL +/- buttons on the front control panel. To scan channel numbers which are higher than the channel being received, press and hold the CHANNEL "+" button. Release when the desired channel is reached. Press and hold the CHANNEL "-" button to scan lower numbered channels. Release when the desired channel is reached.

Note:

- If an invalid channel is entered, the entered data is cleared and the display returns to the previous number.

Programming favorite channels

Skipping unused channels makes it possible to scan only those channels which are active in your area.

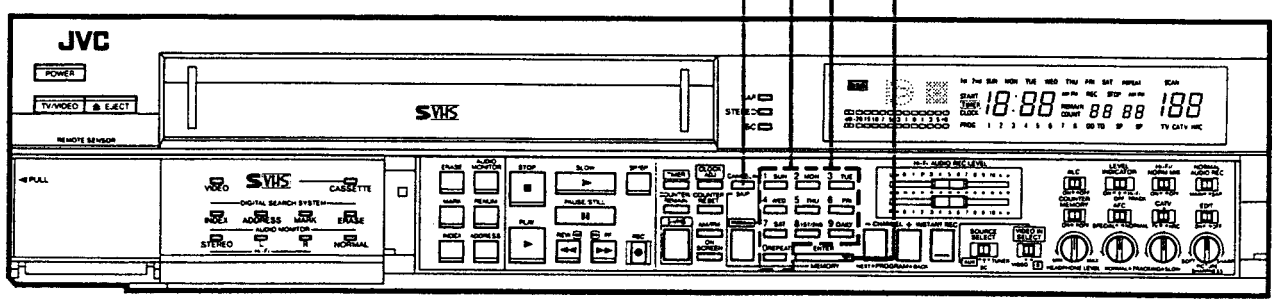
Skipping channels

1. Select the channel you want to skip with numeric keys or up/down tuning.
2. Press CANCEL/SKIP.
   - The letters "PO" will appear momentarily in place of the channel number, indicating that the corresponding channel has been skipped.
   - The channel is now eliminated from the up/down scanning sequence. Repeat for each channel you want to skip.

Storing channels

1. Press the numeric keys to select the channel you want to re-enter.
2. Press ENTER within 2 seconds.
   - The channel "entered" will now be available when the channel scanning sequence is used.

Note:
If the recorder is unplugged from the AC outlet, or there has been a power interruption, favorite channel programming will be maintained. There is no need to re-program channels.



Cable (CATV) Channel Reference Chart

The Cable TV (CATV) Channel Reference Chart is supplied for your convenience. Fill in the name or number of the actual station being provided by your CATV company on each CATV channel. (Your CATV company should give you this information.)
If the TV tuner is NOT connected to a CATV antenna system, it is important that the Band Select switch be in the TV position to properly receive VHF channels 2 through 13 and UHF channels 14 through 69.
Note: CATV channels A-1, A-2 & A-8 are not available in Canada.

CATV channel	2	3	4	4a (A-8)	5 (A-7)	6 (A-6)	A-5	A-4	A-3	A-2	A-1	A	B	C	D	E	F	G
Channel number indication	2	3	4	1	5	6	95	96	97	98	99	14	15	16	17	18	19	20
Actual TV station																		
CATV channel	H	I	7	8	9	10	11	12	13	J	K	L	M	N	O	P	Q	R
Channel number indication	21	22	7	8	9	10	11	12	13	23	24	25	26	27	28	29	30	31
Actual TV station																		
CATV channel	S	T	U	V	W	W+1 (AA)	W+2 (BB)	W+3 (CC)	W+4 (DD)	W+5 (EE)	W+6 (FF)	W+7 (GG)	W+8 (HH)	W+9 (II)	W+10 (JJ)	W+11 (KK)	W+12 (LL)	W+13 (MM)
Channel number indication	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49
Actual TV station																		
CATV channel	W+14 (NN)	W+15 (OO)	W+16 (PP)	W+17 (QQ)	W+18 (RR)	W+19 (SS)	W+20 (TT)	W+21 (UU)	W+22 (VV)	W+23 (WW)	W+24 (XX)	W+25 (YY)	W+26 (ZZ)	W+27 (AAA)	W+28 (BBB)	W+29	W+30	W+31
Channel number indication	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67
Actual TV station																		
CATV channel	W+32	W+33	W+34	W+35	W+36	W+37	W+38	W+39	W+40	W+41	W+42	W+43	W+44	W+45	W+46	W+47	W+48	W+49
Channel number indication	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85
Actual TV station																		
CATV Channel	W+50	W+51	W+52	W+53	W+54	W+55	W+56	W+57	W+58	W+59	W+60	W+61	W+62	W+63	W+64	W+65	W+66	W+67
Channel number indication	86	87	88	89	90	91	92	93	94	100	101	102	103	104	105	106	107	108
Actual TV station																		
CATV channel	W+68	W+69	W+70	W+71	W+72	W+73	W+74	W+75	W+76	W+77	W+78	W+79	W+80	W+81	W+82	W+83	W+84	
Channel number indication	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	
Actual TV station																		

INFORMATION ON THE HR-S7000U'S AUDIO SYSTEM

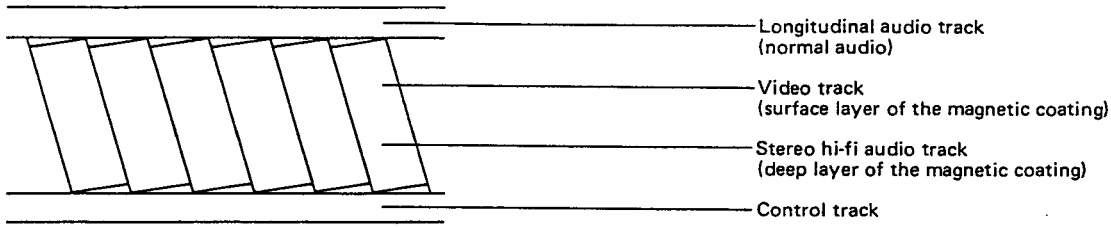
Hi-Fi and normal audio

To provide true hi-fi audio accompaniment to Super VHS entertainment, the HR-S7000U employs a unique audio recording system. Hi-fi audio signals (2-channel) are recorded deep into the tape's magnetic coating, and the video signal is recorded on top of the audio signals in a shallower layer. At the same time, another audio head records normal audio signals (monaural) onto the usual longitudinal audio track. Since this longitudinal audio track is exactly the same as on non-Hi-Fi VHS tapes, audio signals recorded on tapes with the HR-S7000U can be played back on other VHS machines, and vice versa.

CAUTION:

- The hi-fi soundtrack recorded with the HR-S7000U cannot be reproduced with video equipment other than Hi-Fi VHS.
- Tapes recorded with a conventional stereo video recorder produce monaural sound when played back with the HR-S7000U.

Tape pattern recorded with the HR-S7000U



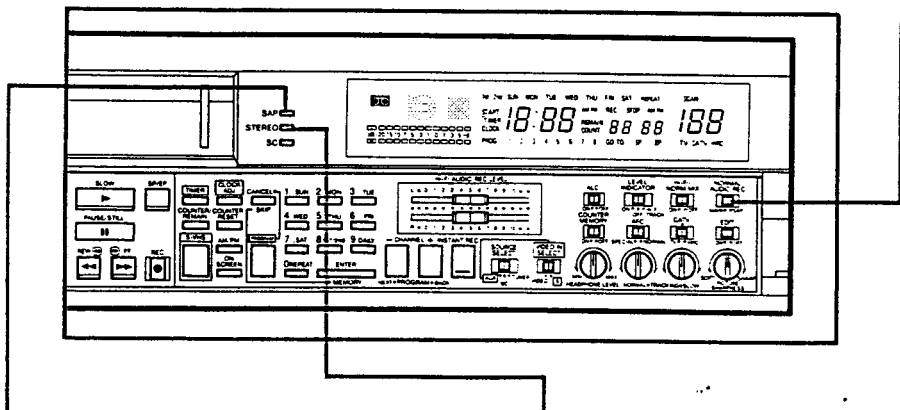
Hi-fi audio recording and reproduction are available only from the hi-fi audio track while the longitudinal audio track provides normal audio.

The hi-fi and normal soundtracks are recorded simultaneously.

MTS (Multichannel Television Sound) compatibility

When stereo and SAP programs are being received, the indicators light to inform you of the type of broadcasts. Then you can select the desired soundtrack for recording with a single switch.

The normal (longitudinal) audio track is monaural. Therefore, stereo programs are recorded in mono on the normal audio track. SAP programs can only be recorded on the normal audio track.



NORMAL AUDIO REC select switch
This switch selects the soundtrack to be recorded on the normal audio track when an MTS broadcast is being received and functions only when the SOURCE SELECT switch is set to either TUNER or SC.

SAP: to record an SAP soundtrack on the normal audio track. (The main soundtrack, either mono or stereo, will be recorded on the hi-fi audio track.)

MAIN: to record a main soundtrack on the normal audio track. Stereo programs will be recorded in mono (L + R mixed) on the normal audio track (and in stereo on the hi-fi audio track).

SAP indicator
Lights when an SAP program is being received. For recording the SAP soundtrack, set the NORMAL AUDIO REC select switch to SAP.

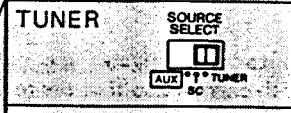
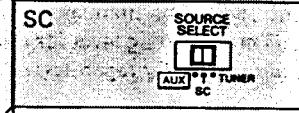
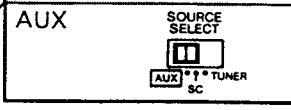
STEREO indicator
Lights when a stereo program is being received. Stereo programs are always recorded in stereo on the hi-fi audio track.

If the STEREO and SAP indicators light, it means that a stereo + SAP program is being received. If you want to record both soundtracks, set the NORMAL AUDIO REC select switch to SAP. Then the stereo soundtrack will be recorded on the hi-fi audio track and the SAP soundtrack will be recorded on the normal audio track.

Note:

- Off-air MTS programs are received in accordance with the Broadcast Television Systems Committee (BTSC) standard. The method of transmission of stereo programs via cable varies from area to area and may not be compatible with the BTSC standard. Consult your local cable company for compatibility in your area.

Recording options according to the settings of the SOURCE SELECT switch

Track / SOURCE SELECT switch position	Video track	Normal audio track (mono)	Hi-fi audio track (2-channel)
TUNER 	TV picture (from built-in tuner)	TV sound (from built-in tuner)	
SC 	TV picture (from built-in tuner)	TV sound (from built-in tuner)	Audio signal from AUDIO IN (front or rear panel)
AUX 	Video signal from VIDEO IN (front or rear panel) or S-VIDEO IN (front panel)	Audio signal from AUDIO IN (front or rear panel)	

Note:

- You can record audio only (without recording any video signal) on the normal and hi-fi audio tracks. This means you can record a continuous 8-hour FM program onto a single cassette (T-160). For this purpose, set the SOURCE SELECT switch to AUX and connect an audio source, such as an FM tuner, to the AUDIO IN connectors (front or rear panel). Nothing should be connected to the VIDEO IN connector.

Recording options according to the type of broadcasts and the setting of the NORMAL AUDIO REC select switch

Audio track / NORMAL AUDIO REC select switch position / Type of broadcast		Normal audio track (mono)	Hi-fi audio track (2-channel)	
			L	R
Regular broadcast (monaural audio)	Either position	Mono	Mono	Mono
Regular + SAP (Second audio program)	MAIN	Main audio	Main audio (mono)	Main audio (mono)
	SAP	Second audio	Main audio (mono)	Main audio (mono)
Stereo + SAP (Second audio program)	MAIN	L + R mixed	Stereo	
	SAP	Second audio	Stereo	
Stereo broadcast	Either position	L + R mixed	Stereo	

Note:

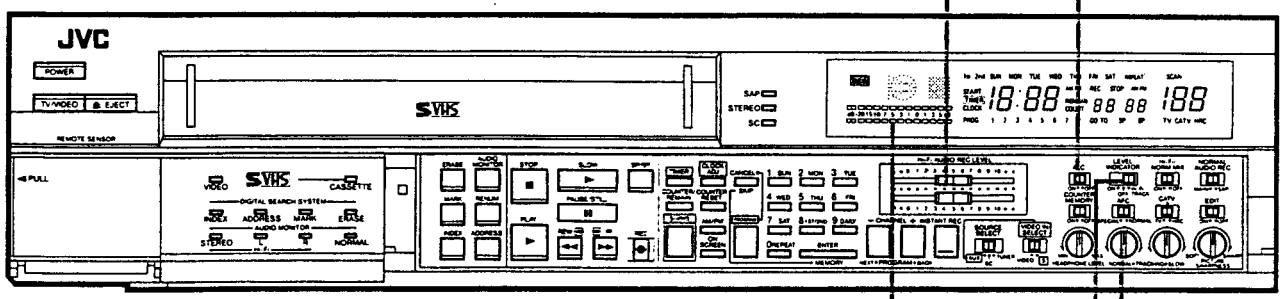
- Second audio programs cannot be recorded on the hi-fi audio track.

Hi-Fi audio recording level adjustment

While recording onto the normal audio track is controlled by the built-in Automatic Level Control (ALC) circuit, hi-fi audio recording has two control options: manual and automatic.

Hi-Fi AUDIO REC LEVEL controls
Slide these controls, the upper for left channel and the lower for right channel, for manual adjustment of the hi-fi audio recording level.

ALC switch
Setting this switch to ON activates the built-in audio limiter circuit for both channels so that the recording level is automatically controlled. For manual adjustment, set this switch to OFF. (The recording level for normal audio is always controlled automatically regardless of the setting of this switch.)



Audio level indicators
For manual control of the recording level, first set the relevant switches as follows:

ALC → OFF
LEVEL INDICATOR → ON
AUDIO MONITOR → Hi-Fi STEREO

Then slide the Hi-Fi AUDIO REC LEVEL controls referring to these indicators. When indicators up to or near 0 dB light for the loudest signal being received, the recording level is optimum. (The level at which only one red indicator lights from time to time may be most appropriate.)
During playback, these indicators show the level of audio signals recorded on the tape and selected with the AUDIO MONITOR button.
If no signal is recorded on the hi-fi audio track, the level of normal audio is automatically indicated.
These indicators do not light when the LEVEL INDICATOR switch is in the OFF position.

Notes:

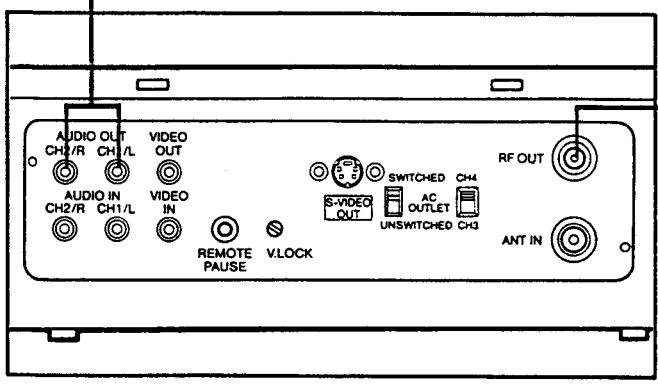
- With the AUDIO MONITOR button in the Hi-Fi L, Hi-Fi R or NORMAL position, the recording level of hi-fi audio signals cannot be correctly indicated. Select the Hi-Fi STEREO position when adjusting the recording level.
- The normal audio signal level is also displayed by these indicators, but cannot be adjusted.

LEVEL INDICATOR switch and NORMAL TRACKING control
The right-channel audio level indicator also functions as a tracking meter during playback. If noise or breaks are sensed in the reproduced sound from the hi-fi audio track, adjust the NORMAL TRACKING control while referring to the meter. For this purpose, set this switch to Hi-Fi TRACK and turn the NORMAL TRACKING control so that the greatest number of elements of the right-channel indicator light.
When this switch is set to OFF, the indicators do not light.

Note:
When playing back a tape with no recording on the hi-fi audio track, the level indicator will not light when the LEVEL INDICATOR switch is set to Hi-Fi TRACK.

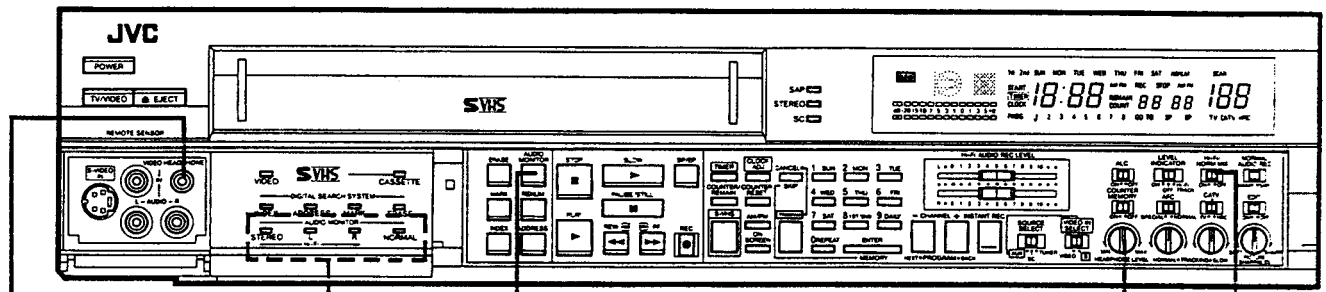
Dual-audio playback flexibility

Two different types of audio tracks (hi-fi and normal) allow a variety of playback options depending on the connection and the settings of relevant controls and switches.



AUDIO OUT connectors
Delivers the audio signals from both hi-fi and normal audio tracks.

RF OUT connector
Delivers audio and video signals to a TV receiver. When the recorder is not used, the antenna signal is supplied from this connector to the TV receiver to allow regular TV viewing; when a video tape is played back through the RF OUT connector, the audio is reproduced always as monaural; with hi-fi stereo tapes, both channels are mixed or the one selected by the AUDIO MONITOR button is reproduced. Therefore, for stereo playback, connect a stereo system to the AUDIO OUT connectors. Refer to page 12.



AUDIO MONITOR indicators

HEADPHONE LEVEL control

HEADPHONE jack
Delivers the audio signals from both hi-fi and normal audio tracks. The headphone output level is adjustable with the HEADPHONE LEVEL control.

AUDIO MONITOR button
Selects the hi-fi audio channel (left, right or both) or the normal soundtrack for listening. Use this button together with the Hi-Fi/NORM MIX switch referring to the four AUDIO MONITOR indicators (Hi-Fi STEREO, Hi-Fi L, Hi-Fi R and NORMAL).

- Set to Hi-Fi STEREO to listen to a stereo soundtrack.
- Set to Hi-Fi L to listen to the hi-fi left channel sound.
- Set to Hi-Fi R to listen to the hi-fi right channel sound.
- Set to NORMAL to listen to the normal sound.

Note:

- This button functions during recording as well, although it has no effect on the recorded signal.

Hi-Fi/NORM MIX switch
Operates in conjunction with the AUDIO MONITOR button to select soundtrack for listening.

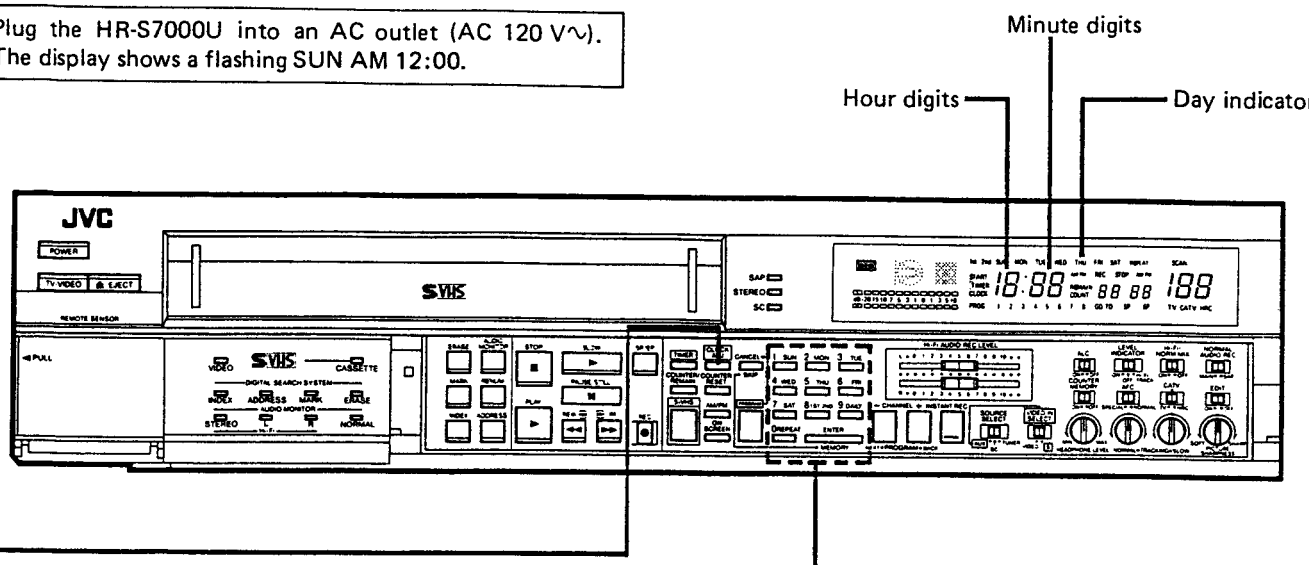
- Set to ON to listen to a mixture of the normal soundtrack and one of the Hi-Fi soundtrack options selected with the AUDIO MONITOR button.

Notes:

- This switch functions during recording as well, although it has no effect on the recorded signal.
- When playing back a tape containing the same soundtrack on both hi-fi and normal audio tracks, a slight time lag is sensed between the two soundtracks, probably with some distortion, in the ON position. Therefore, in such a case, use the OFF position.
- Set to OFF to listen to each soundtrack independently by selecting it with the AUDIO MONITOR button.

CLOCK SETTING

Plug the HR-S7000U into an AC outlet (AC 120 V~).
The display shows a flashing SUN AM 12:00.



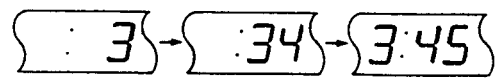
1 Press CLOCK ADJ.
The indicated day will flash.

2 Press a numeric key corresponding to the day of the week.
- If the indicated day is OK, proceed to the next step.

3 Press ENTER. The time display section will flash.

4 Press AM/PM to obtain correct indication.
- If the indicated sign is OK, proceed to the next step.

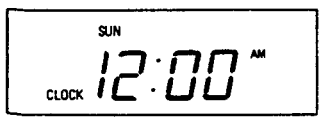
5 Key in the number corresponding to the time to be set.
- Example: To set 3:45, press keys [3] [4] [5] in this order.



6 Press ENTER at the exact instant of the time signal, and the clock will be set accurately to the present time.

Notes:
- Clock setting must begin within 10 seconds of pressing the CLOCK ADJ. button, otherwise it will be necessary to press the CLOCK ADJ. button again.
- Clock setting is not possible if the TIMER button is engaged with the TIMER indicator lit. First check to see that the TIMER indicator is not lit.
- Steps 4 and 5 can be reversed.
- The NEXT and BACK keys can be used to switch from the day to time setting mode, or vice versa.
- Advance the minute digits slightly ahead of the exact time. Press the CLOCK ADJ. button precisely when a time signal from broadcast or telephone is heard to insure accurate time setting.

Power failure indicator
The clock display may reset to SUN AM 12:00 and start to flicker. This is not a malfunctioning of the clock, but it indicates that there has been a power failure in excess of 10 minutes. Readjusting the time restores the normal condition of the clock display.



- If the period of power outage is within about 10 minutes, correct time-keeping continues when power is reapplied.
- During this 10-minute period, the built-in memory back-up capacitor maintains time-keeping and preset timer memory, though the display blacks out.
- The memory backup capacitor is being recharged when the recorder is not in use. For the fully-discharged capacitor to be recharged sufficiently for 10-minute backup, it takes more than 30 minutes.

LOADING AND UNLOADING A CASSETTE

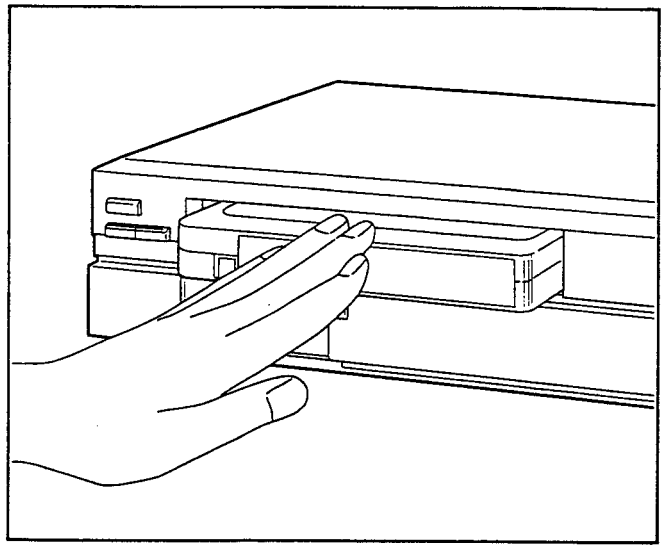
Loading

Insert a cassette as illustrated with its labelled side facing you.

- With a cassette inserted, the mark indicating "cassette inserted" appears on the display panel. If you insert an S-VHS cassette, the S-VHS CASSETTE indicator will also light.

Unloading

Press the EJECT button. The cassette will be ejected.



Motorized loading system

- The cassette can be loaded even when the power has not been turned on. Inserting a cassette into the loading slot turns the power on automatically.
- The cassette can be unloaded even when the power has been turned off. If a cassette is inside, pressing the EJECT button turns the power on automatically and, after ejection of the cassette, shuts it off automatically.
- Inserting a cassette, with its safety tab removed, turns the recorder on and playback of the cassette begins automatically.

Notes:

- Be sure to insert the cassette firmly into the slot; otherwise, it will be automatically ejected.
- The automatic loading mechanism will operate only when the cassette is inserted correctly.

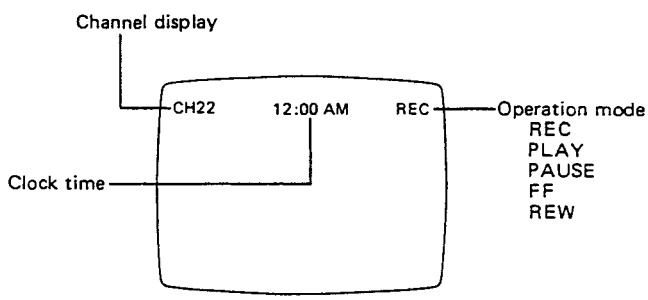
Caution

- If unloading of a cassette is not possible, check to see whether the TIMER indicator is lit. If so, press the TIMER button so the TIMER indicator goes off.
- Do not attempt to pull out the cassette once automatic loading has started.

Warning

- Do not insert fingers or any foreign object beyond the door flaps of the cassette loading slot, as this could lead to injury or damage to the mechanism. Show special caution with children.

ON-SCREEN CHANNEL, TIME AND MODE DISPLAY



Automatic indication

- Channel
  Each time a different channel is selected, the number of that tuned-in channel is displayed on the TV screen for 5 seconds.
- Operation mode
  Each time the operation mode is changed, that engaged mode is displayed.
  REC: Displayed for 5 seconds together with channel.
  PLAY: Displayed only while the tape is being loaded. Not displayed when the mode is changed from Still to Play.
  PAUSE: Remains displayed as long as the Pause mode continues.
  FF/REW: Displayed for 5 seconds.

Manual recall/cancel

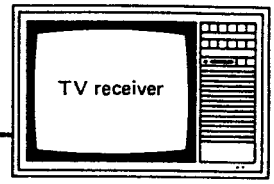
- For anytime checking of the recorder status or clock time, press the ENTER button (on the remote control) or the ON SCREEN button (on the recorder). The corresponding indication will be available on the screen for 5 seconds.

Notes:

- The on-screen display does not function while the FDP shows the power failure indicator (page 19).
- For on-screen timer programming, see pages 29 and 30.

BASIC OPERATION FOR RECORDING TV PROGRAMS

1 Switch ON.
- Adjust the TV receiver's channel to your video channel (3 or 4).



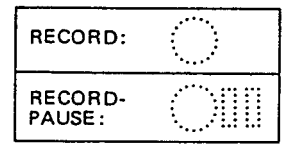
This section describes the step-by-step procedure for recording a TV program while watching it, assuming that it is a regular (monaural main audio) program.
For other recording options, refer to the next page where variations from this basic operation are described.

3 Press TV/VIDEO to engage the VIDEO mode (the indicator lights).

2 Load a cassette. Power will be switched on automatically.

8 Hi-Fi audio recording level adjustment.
Refer to page 17.
- For automatic level adjustment, simply set the ALC switch to ON.

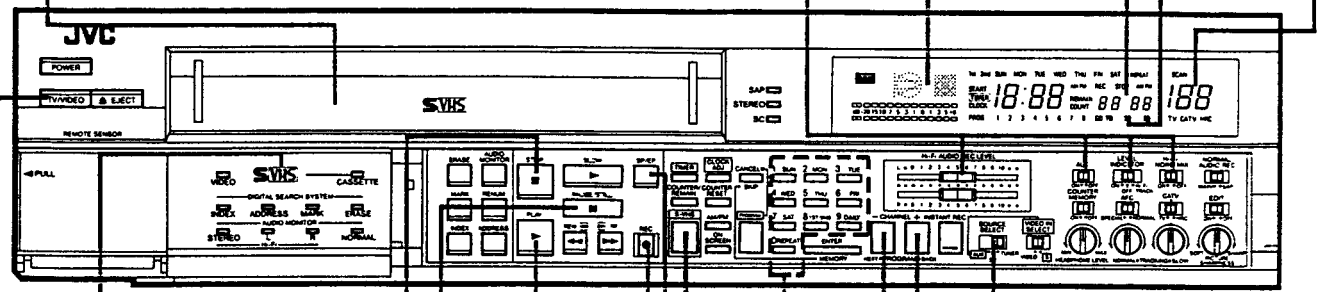
Mode indicator



Channel display

SP/EP indicator

Counter/Remaining time display



S-VHS indicator

6 Set to TUNER.

7 Select the channel you wish to record.

9 Press REC and PLAY simultaneously to start recording.

4 For S-VHS recording, press S-VHS so that the S-VHS indicator will light.

PAUSE/STILL button

5 Select to either SP or EP.
SP: 2 hours 40 minutes with a T-160 cassette.
EP: 8 hours with a T-160 cassette.
(Check the SP/EP indicator on the FDP.)

10 Press STOP at the end of the program.

Notes:

- If there is part of the program you don't want to record, press the PAUSE/STILL button. "PAUSE" will appear on the TV screen. To release the Pause mode, press the PLAY button.
- When recording is restarted from the Pause mode, assemble recording is performed so that the playback picture will not distort at the edit point. A few frames recorded before the pause are erased due to overlap of the new recording. This is not due to any defect of the unit.
- When a recording containing assemble edits (segments recorded using the PAUSE function) is played back, color noise may appear momentarily at edit points. This is not due to any defect of the unit.
- When the Pause mode continues for longer than about 5 minutes, the Stop mode will be entered automatically.
- The built-in tuner's automatic channel lock mechanism prevents the selected channel from being altered during recording. Therefore, if you wish to change the channel during recording, first engage the Pause mode and then select a different channel.
- If the REC button cannot be engaged, check to see if the cassette safety tab has been removed. (See page 3.)
- When the end of the tape is reached during recording, the tape is automatically rewound to the beginning and stops.
- Press the COUNTER/REMAIN button to check how much recording time is left. (For more details refer to page 28.)

RECORDING ONE TV PROGRAM WHILE WATCHING ANOTHER

A program not being viewed can be recorded while you enjoy another program. This permits the recorded program to be played back later at your convenience.
The recording procedure is exactly the same as described on the previous page. The points to be remembered are:

- Select the channel you wish to record with the recorder's channel select buttons.
- Select the channel you wish to view with the TV receiver's channel selector.
- Make sure that the VIDEO indicator is not lit. If lit, press the TV/VIDEO button so that it goes out.

RECORDING STEREO TV PROGRAMS

When stereo TV programs are broadcast, the HR-S7000U is capable of automatically receiving them in stereo. When a stereo program is being received , the STEREO indicator lights and recording is made in stereo on the hi-fi audio track and in monaural on the normal audio track. To listen to the stereo soundtrack during recording, set the AUDIO MONITOR select button to Hi-Fi STEREO. If this button is left either in the Hi-Fi L or Hi-Fi R position, you will hear only one channel while recording, even though the recording is being made in stereo.

RECORDING SAP (Second Audio Program) TV PROGRAMS

When an SAP TV program is being received, the SAP indicator lights. To record such a program, pay attention to two additional controls and the basic operation described on the previous page.

- Set the NORMAL AUDIO REC select switch to SAP to record the second audio program. To record the main audio program only, set this switch to MAIN.
- Set the AUDIO MONITOR select button to NORMAL to listen to the SAP soundtrack being recorded.

Note:

- SAP programs can be recorded only on the normal audio track. It is not possible to record any SAP program on the hi-fi audio track, regardless of the setting of any switch.

RECORDING FM SIMULCAST TV PROGRAMS

FM simulcast TV programs can be recorded using an FM stereo tuner. Connect necessary components. (Connect the FM tuner to the rear panel AUDIO IN connectors.) Select the TV channel broadcasting the simulcast program with the recorder's channel select buttons and tune the FM stereo tuner to the station broadcasting the soundtrack for this TV program.
The only difference from the basic recording procedure is in step 6 on page 21.

- Set the SOURCE SELECT switch to SC.
  Then the SC indicator will light. With this setting, the video and audio signals from the built-in tuner will be recorded on the normal audio track and the audio signal from the FM stereo tuner will be recorded on the hi-fi audio track.

Notes:

- After finishing recording, be sure to set the SOURCE SELECT switch back to TUNER.
- While recording simulcast programs, the hi-fi sound might be distorted momentarily at switching points between different programs (at the insertion of commercials, for example). This is not due to any defect of the unit.

RECORDING A TV PROGRAM WHILE RECORDING AN INDEPENDENT AUDIO SOURCE

Using the "simulcast" recording function, you can record independent audio and video programs, because the TV soundtrack is not lost, but recorded on the normal audio track. While recording a TV program, record any audio source independently.

- Connect an audio component (such as an FM tuner) to the AUDIO IN connectors.
- Set the SOURCE SELECT switch to SC.

Notes:

- If you stop recording to avoid unwanted portions of the TV program using the PAUSE/STILL button, the audio program from the external source will also be eliminated.
- If television broadcasting comes to an end during recording, the hi-fi sound being recorded from the external source may be distorted. It is recommended that you check the schedule of TV broadcasts in advance.
- After finishing recording, be sure to set the SOURCE SELECT switch to TUNER; otherwise recording on the hi-fi audio track from the built-in tuner will not be possible.

USING THE HR-S7000U AS AN AUDIO DECK

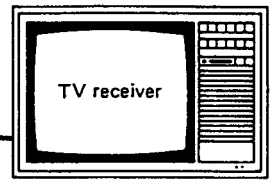
Audio-only recording

You can record audio only (without recording any video signal) on the normal and hi-fi audio tracks. This means you can record a continuous 8-hour FM program onto a single cassette (T-160).

- Connect an audio source (such as an FM tuner) to the AUDIO IN connectors.
- DO NOT connect any equipment to the VIDEO IN connector.
- Set the SOURCE SELECT switch to AUX.

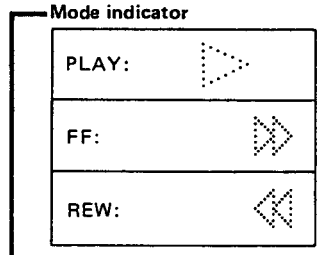
PLAYING BACK A VIDEO CASSETTE

1 Switch ON.
Adjust the TV receiver's channel to the video channel (3 or 4).



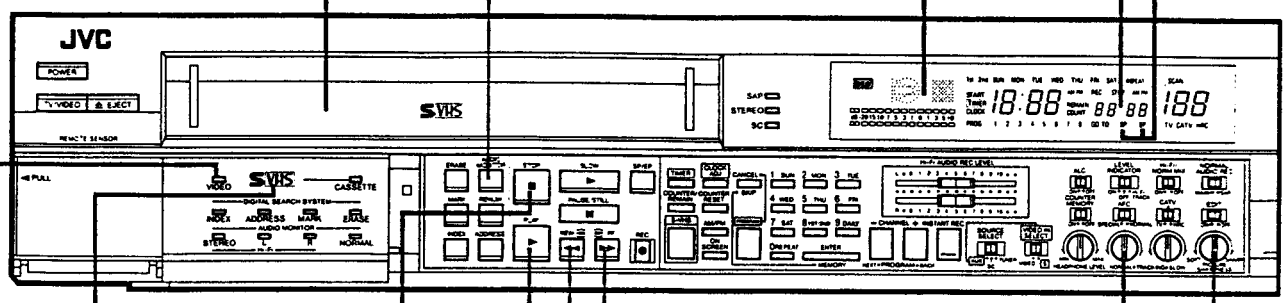
3 Set the AUDIO MONITOR button as required (also check the Hi-Fi/NORM MIX switch). See page 18.

2 Load a pre-recorded cassette. Power will be switched on automatically. When the cassette loaded has no safety tab, playback will start automatically.



Counter/Remaining time display

SP/EP indicator



4 Press PLAY.

5 Press STOP at the end of the program.

PICTURE SHARPNESS control

NORMAL TRACKING control

S-VHS mode indicator

The VIDEO mode indicator lights and the VIDEO mode is automatically engaged.

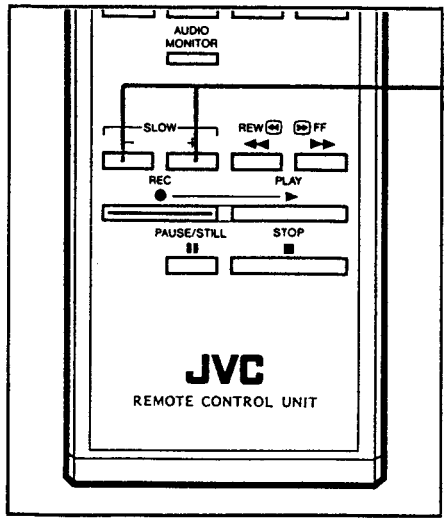
FF button
- To fast forward the tape, press this button in the Stop mode. "FF" will appear on the TV screen.

REW button
- To rewind the tape, press this button in the Stop mode. "REW" will appear on the TV screen.

Notes:

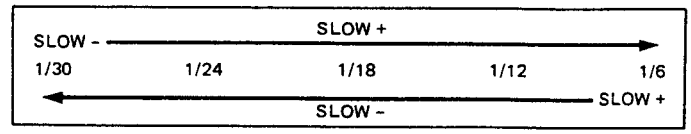
- Irrespective of the SP/EP mode button setting, the SP, LP or EP recording mode is automatically detected and played back at the correct speed. The SP or EP indicator on the FDP lights. No indicator lights in the LP mode.
- Irrespective of the S-VHS mode button setting, the S-VHS or VHS recording mode is automatically detected and played back in the correct mode. The S-VHS mode indicator lights for playback of S-VHS recordings.
- The tape-end auto-rewind mechanism functions in both the Play and Fast Forward modes.
- Images on the screen can be adjusted to a preferred softer or sharper definition by turning the PICTURE SHARPNESS control in the corresponding direction.
- Noise bars may appear on the screen if you playback a tape which was recorded using another recorder. In such cases, use the NORMAL TRACKING control. Turn it slowly in either direction until the noise bars move out of the picture frame. After playing a particular tape, return the control knob to the center position.
- When listening through headphones, if the volume is too weak or too loud, adjust the HEADPHONE LEVEL control for comfortable listening.

SPECIAL-EFFECTS PLAYBACK



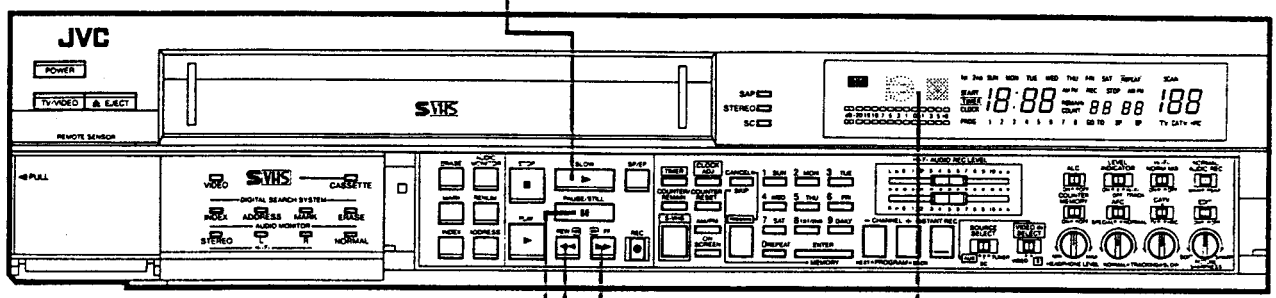
Slow-motion playback
SLOW -/+ buttons

- Press the "-" button while in the Play mode; slow-motion playback at 1/30 normal speed will start.
- Press the "+" button while in the Play mode; slow-motion playback at 1/6 normal speed will start.
- Each time the "-" button is pressed, the tape speed becomes slower.
- Each time the "+" button is pressed, the tape speed becomes faster.
- To return to the normal Play mode, press the PLAY button.



Note:

- When the recorder's SLOW button is pressed, the slowest speed (1/30) is engaged and each time it is pressed, the speed increases at the same rate as above.



High-speed reverse search
REW/SHUTTLE SEARCH button

- To shuttle search the tape in the reverse direction, hold this button pressed in the Play mode.
- The shuttling speed is about 7 times normal.

Mode indicator

FF SHUTTLE SEARCH: ▷»	STILL: ▯▯
REW SHUTTLE SEARCH: ▷«	SLOW: ▷▯▯

Still playback
PAUSE/STILL button

- Press while in the Play mode; the tape will stop and a still picture will be obtained.
- To advance the still picture, press again.
- To return to the normal Play mode, press the PLAY button.

High-speed forward search
FF/SHUTTLE SEARCH button

- To shuttle search the tape in the forward direction, hold this button pressed in the Play mode.
- The shuttling speed is about 7 times normal.

Notes:

- When the Still mode continues for longer than about 5 minutes, the Stop mode will be entered automatically.
- With some televisions, the still picture may be unstable.
- If noise bars are visible, use the TRACKING controls as described on the previous page.
- Vertical jitters in the Still mode can be corrected by adjusting the V.LOCK screw on the rear panel of the unit.
- With some video cassettes, the TV picture may distort during slow-motion playback. This is not due to any defect of the unit.
- Special-effects playback is not possible in the LP mode. When the Special-effects mode is engaged during playback of LP recorded tapes, the picture disappears from the screen. If you happen to engage one of the Special-effects modes while playing an LP tape, simply press the PLAY button to restore the picture.

DIGITAL SEARCH SYSTEM

VHS Index and Address Search System

The HR-S7000U incorporates Digital Search functions for high-speed tape access; the Index Search function gives access to index codes which are automatically placed on the tape at the beginning of individual recordings or manually at any point during recording or playback, and the Address Search function locates any specific point on the tape in reference to 4-digit numbers which are also recorded either automatically or manually. With the Digital Search System, your recorded tapes have positional identifications like chapters and pages of a book.

Index Search System

This function is especially convenient when you record several programs on one tape or with music videos which consist of different tunes.
Index codes are always automatically placed at the beginning of recordings which are started from the Stop or Timer Stand-by mode.

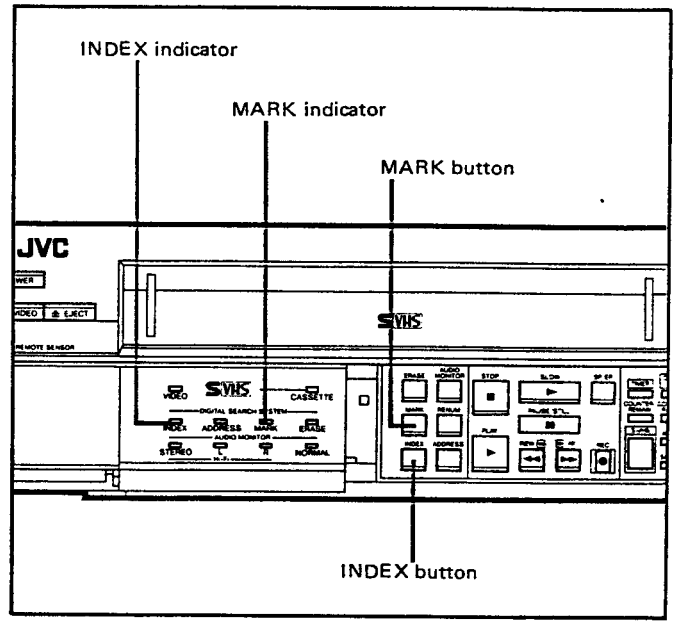
Using the Index Search function

1. Press the INDEX button while in the Play or Stop mode.
   - •The INDEX indicator will light and the SCAN indicator will appear on the FDP.
2. Specify the index number using one of the numeric keys.
   - •You can specify up to 9.
   - •The specified number will appear in the channel display of the FDP.
3. Press either the FF or REW button within 10 seconds.
   - •The tape will move at high speed and the index number will count down to "zero", from which point normal playback will start.
   - •If the INDEX button was pressed in the Play mode, the screen shows search pictures; if the button was pressed in the Stop mode, the index code is reached faster in the Rewind or Fast-Forward mode.
   - •To cancel the Index Search mode before completion, press the PLAY or STOP button.

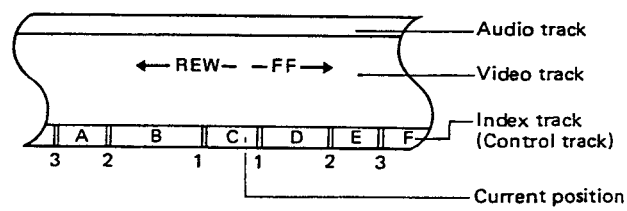
Manual Marking of Index Codes

After you have recorded a tape, you can add extra index codes to it so that you can locate specific points easily and quickly. It is recommended to keep a record of how many index codes are recorded on each tape so you can specify the index number accurately.

1. Press the INDEX button in the Play (or Still) or Record mode.
   - •The INDEX indicator will light.
2. Press the MARK button at a point where you want to put an index code onto the tape.
   - •The MARK indicator lights during the marking process.
   - •Since the automatic marking of an index code does not take place when recording is resumed from the Record-Pause mode, if you wish to locate this point later, use this manual marking function before you release the Pause mode to resume recording.



Tips for specifying the index number



- •"1" + FF moves playback to the beginning of segment D.
- •"1" + REW moves playback to the beginning of segment C.
- •"2" + REW moves playback to the beginning of segment B.
- •If no number is entered, a value of "1" is assumed.

Notes for Using the VHS Index and Address Search System

- If the end of the tape is reached while still in the Index or Address Search mode, the mode is cancelled and the tape rewound.
- The index and address codes on a tape with its safety tab removed cannot be changed.
- If the distance between codes is too short, it may cause malfunctioning in search; renumbering or erasing.
- Audio reproduction may not be normal while a code is being recorded in the Play mode. This is not due to any defect of the unit.
- Changing the codes in the vicinity of switching points between SP and EP recordings will distort the pictures.
- While the index code or address code is being searched for in the Erase mode, random noise appears on the screen as the tape runs at high speed. This is not due to any defect of the unit.
- Do not operate other buttons while the MARK or ERASE indicator is blinking.
- The INDEX and ADDRESS buttons will not function if the INSTANT REC, PROGRAM, CLOCK ADJ. or TIMER button is engaged.

Address Search System

This system identifies tape positions numerically like the pages of a book so that you can locate any specific point directly with 10-key digital input. Automatic time-based coding is also possible to identify recordings at one-minute intervals.

Marking of Address Codes at Specific Points

1. Press the ADDRESS button while in the Play or Record mode.
   - The ADDRESS indicator will light.
2. Specify the address number with the numeric keys.
   - If not specified, either "0000" or the previous address number, if any, + 1 will be recorded.
   - Use easy-to-remember numbers.
3. Press the MARK button at a point where you want to put an address code onto the tape.
   - The MARK indicator will light and then blink during the marking process.
   - An address code has been recorded when both the ADDRESS and MARK indicators turn off.

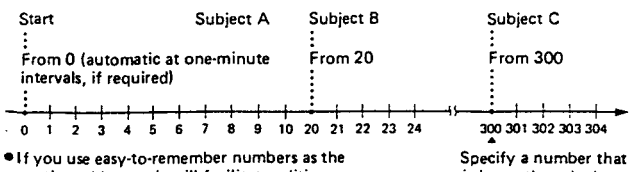
Automatic Time-Based Marking of Address Codes

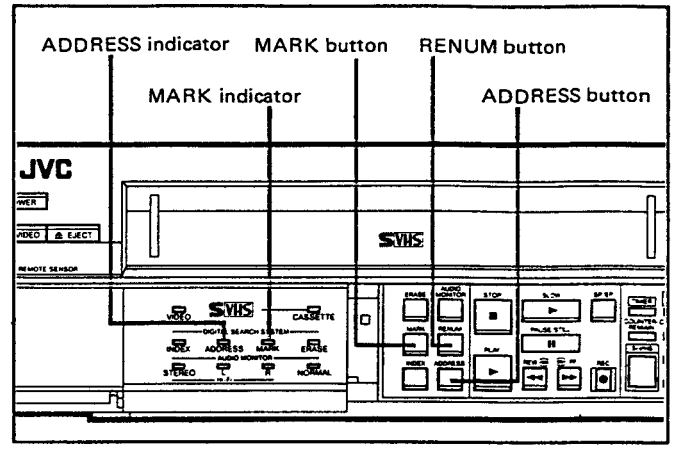
1. Press the ADDRESS button while in the Record mode.
   - The ADDRESS indicator will light.
2. Specify the starting number of successive address codes with the numeric keys.
   - If not specified, either "0000" or the previous address code, if any, + 1 will be the starting number of the next sequence.
3. Press the MARK button where you want to start automatic address marking and, while the MARK indicator is still blinking, press the MARK button once again.
   - Automatic address marking will start with both the ADDRESS and MARK indicators lit and the MARK indicator blinking at the end of each minute.
   - To stop automatic address marking, press the MARK button when the MARK indicator is blinking.

To Call Up an Address Code

1. Press the ADDRESS button while in the Play or Stop mode.
   - The ADDRESS indicator will light.
   - The counter display will show -- -- until the specified address code is detected.
2. Specify the address number to be searched for with the numeric keys.
3. Press the PLAY button.
   - The tape will move at high speed with the GO-TO indicator on the FDP blinking, and, when the specified address code is reached, playback will start automatically.
   - If the ADDRESS button was pressed in the Play mode, the screen shows search pictures; if the button was pressed in the Stop mode, the address code is reached faster in the Rewind or Fast-Forward mode.
   - To cancel the Address Search mode before completion, press the PLAY or STOP button.

Example of Address Coding

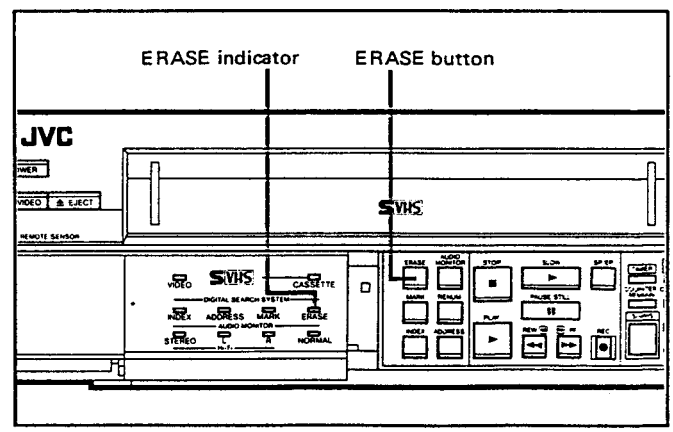

Start
Subject A
Subject B
Subject C
From 0 (automatic at one-minute intervals, if required)
From 20
From 300
0 1 2 3 4 5 6 7 8 9 10 20 21 22 23 24
300 301 302 303 304
• If you use easy-to-remember numbers as the starting addresses, it will facilitate editing or other processing later.
Specify a number that is larger than the last address



Renumbering Address Codes

1. Play back the tape to a point from which you want to renumber the recorded address codes.
2. Press the PAUSE/STILL button to engage the Still mode.
3. Press the RENUM button.
4. Specify the desired starting number with the numeric keys.
   - If not specified, either "0000" or the previous address number, if any, + 1 will be the new starting number.
5. Press the MARK button.
   - The MARK indicator will light.
   - Each time an address code is detected, it is renumbered in succession until the tape end is reached unless the RENUM or STOP button is pressed.
6. To stop renumbering, press the RENUM button.
   - Playback will continue.

Erasing Index and Address Codes



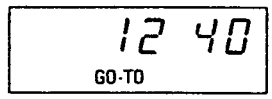
You can erase index and address codes that are no longer required. Erasing is possible only in the Play mode.

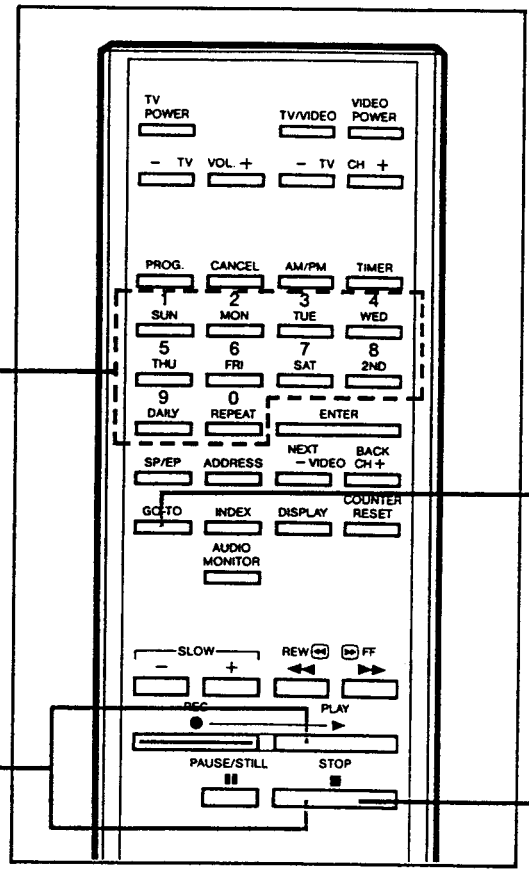
1. Engage the Still mode a few seconds prior to the code to be erased.
2. Press the ERASE button.
   - Whichever code is detected first will be erased.
   - The ERASE indicator blinks during the erasing process. After completion of the erasing process, playback starts automatically.
   - To continue erasing, press the ERASE button while the ERASE indicator is blinking.

COUNTER GO-TO FUNCTION

The counter Go-To function gives you direct access to any point on the tape by simply specifying a desired counter reading. Playback will start automatically from that point.

3 Specify the point you want to locate by using the 10 numeric keys.





4 Press the PLAY button.

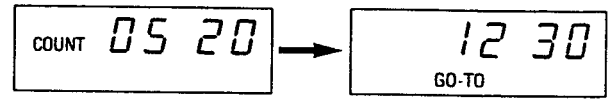
- In cases (1) and (2), the tape will either fast forward or rewind to the specified point.
- In the case of (3), the tape is first rewound to the beginning of the tape (where the counter is automatically reset to "0000") and then is fast forwarded to the specified point.
- Once the beginning of the tape is detected in this way, the tape counter always reads the position in relation to the beginning until the COUNTER RESET button is pressed at a different position.
- If the specified number exceeds the tape length, the tape is first fast forwarded to its end, then rewound to its beginning and stops.
- Use of the Go-To function cancels the previous relative count.
- Press the PLAY or STOP button to cancel the Go-To function and enter the Play or Stop mode.

2 Press the GO-TO button.

- The counter will change to the Go-To mode.

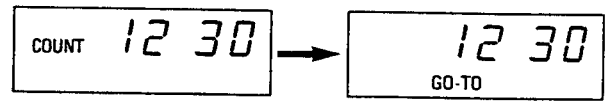
There are three possible cases:

(1) Counter reading changes from one number to another.



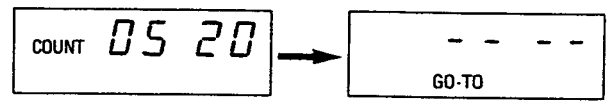
Relative count — Absolute count

(2) Counter reading remains unchanged.



Absolute count — Absolute count

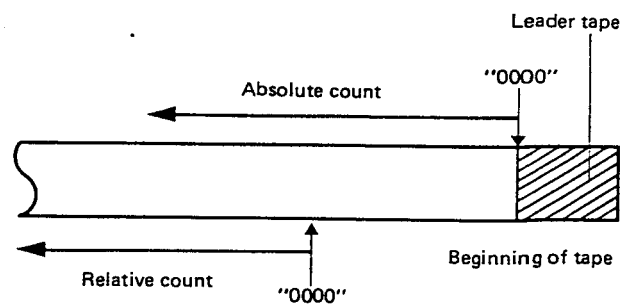
(3) "----" appears instead of a number.



- The recorder did not detect the leader tape when the cassette was loaded and, therefore, cannot determine the tape's present position in relation to its beginning.

1 Engage the Stop mode.

Absolute count vs. Relative count

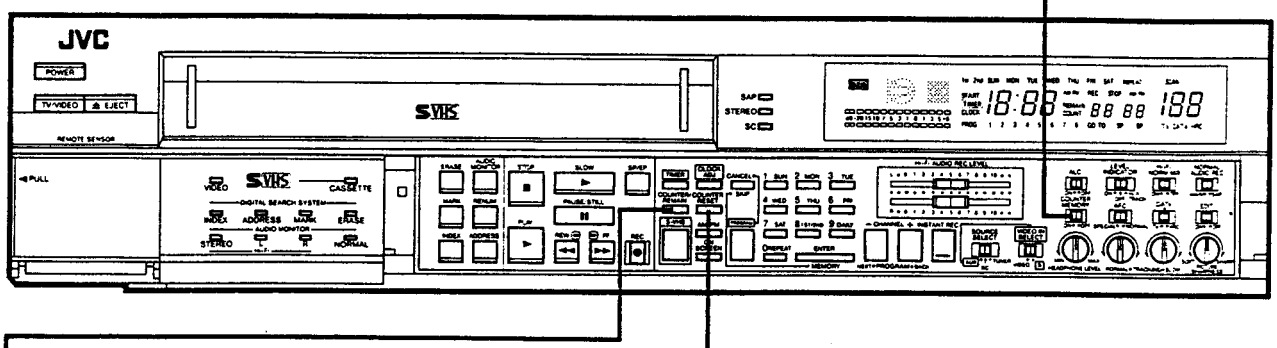


- The absolute "0000" count is automatically set when the leader tape is detected at the time of cassette loading.
- The relative "0000" count is set when the COUNTER RESET button is pressed, and does not apply to the counter Go-To procedure.

COUNTER MEMORY AND COUNTER/REMAIN FUNCTIONS

Counter Memory function

1. Press the COUNTER/REMAIN button to obtain the Counter mode.
2. Press the COUNTER RESET button at a point which you may wish to locate later.
   - The tape counter will indicate "0000".
3. Set the COUNTER MEMORY switch to ON.
4. Press the REW (or FF) button when you need to return to the designated point.
   The tape will rewind (or fast forward) and stop at about the "0000" counter reading automatically.



COUNTER/REMAIN button

When the POWER button is pressed, or a cassette is inserted, the tape counter appears on the display with the COUNT indicator illuminated. To check the length of tape left, press the COUNTER/REMAIN button to engage the Remaining Time mode.
The REMAIN indicator will light and the reading will show the remaining tape length in hours and minutes. (It will take a brief period of tape running for the numerals to appear). To change the display mode back to the tape counter, press the same button once again.

COUNTER RESET button

Press to reset the tape counter to "0000".

Note:

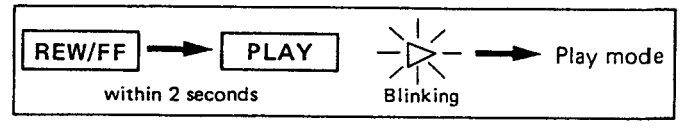
Unless the COUNTER RESET button is pressed, or a cassette leader tape detected (see page 27), the count is retained in memory even after the POWER button is switched to off (as long as the unit is plugged into an AC outlet).

Notes:

- During recording, the remaining tape length is calculated in reference to the recording mode selected by the SP/EP button; during playback, it is calculated in reference to the recording mode of the tape being played (SP/LP/EP).
- The indicated remaining time is approximate. The time required to calculate the remaining tape length and the accuracy of that calculation may vary according to the type of cassette tape. (The remaining time indication is not available if this mode is engaged from FF or REW.)

MEMORY PLAY FUNCTION

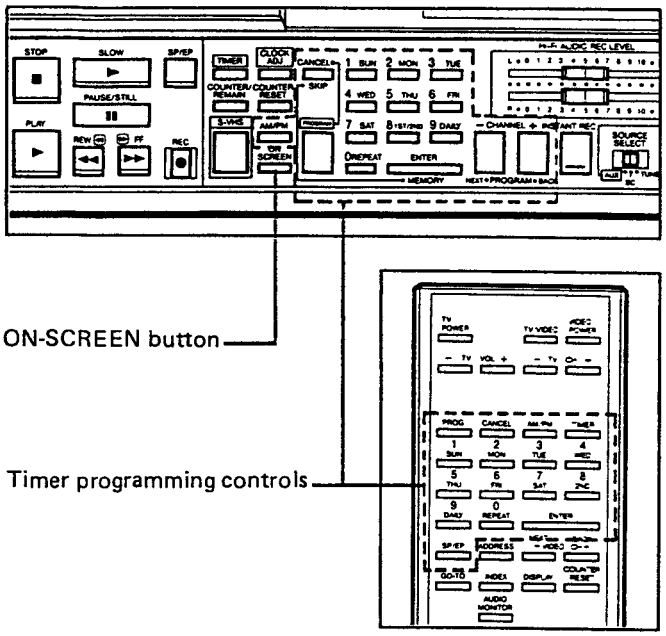
- If you want to watch the tape from its beginning after rewinding, press the REW button and then PLAY within 2 seconds. Playback will start automatically at the beginning of the tape. (The COUNTER MEMORY switch must be in the OFF position.)
- If you want to watch the tape from the counter reading of "0000", press the COUNTER MEMORY switch to the ON position. Then press the REW (or FF) button and then PLAY within 2 seconds.
- While the tape is being rewound, the PLAY indicator is blinking. To cancel the Memory Play mode and go to another mode, press the corresponding button (STOP, PLAY, FF, REW).



AUTOMATIC TIMER RECORDING

The built-in 14-day/8-event programmable timer permits recording of preset channels on preset days at preset times for preset lengths while you are away.

Remote timer programming
For programming the timer, use the 10-digit keypad either on the recorder or the remote control unit.



On-screen timer programming
To program the timer, refer either to the recorder's FDP display or the TV screen using the on-screen display feature.

To engage the On-screen display mode
1. Turn on the TV receiver. Set to your video channel (3 or 4).
2. Press the TV/VIDEO button to engage the VIDEO mode.

With recorder:
3. Press the PROGRAM button, and then the ON SCREEN button; the TV screen picture will change to the On-screen Timer Set mode.

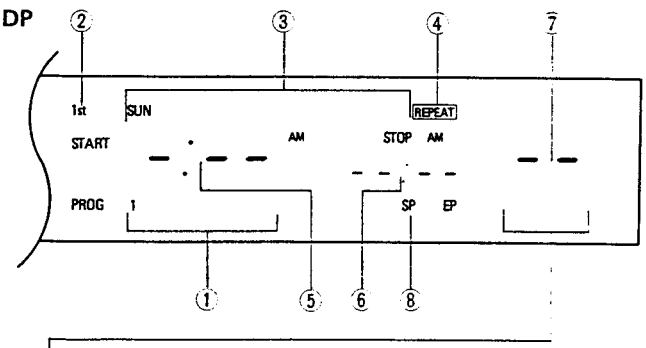
With remote control:
3. Press the PROG. button; the On-screen Timer Set mode will be directly engaged.

To cancel the On-screen display mode
With recorder:
- Press the PROGRAM button with program number 8 having been called up on the screen, or simply press the COUNTER/REMAIN button.
- Pressing the ON-SCREEN button also cancels the on-screen display, but this disengages the On-screen mode as a whole.

With remote control:
- Press the PROG. button with program number 8 having been called up on the screen.

FDP and ON-SCREEN display

FDP



Band indicator
- Not programmable, but selected by the band select switch (TV/CATV/HRC). Blinks when an invalid channel number is entered.

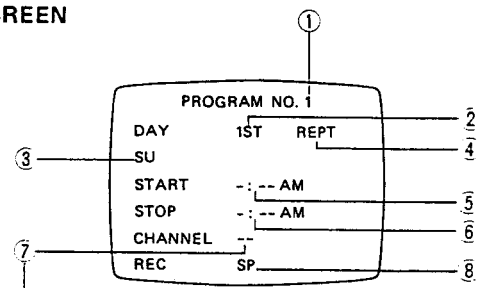
① Program number
- Available indication: 1 through 8
- Selectable with PROG(RAM) or numeric keys.

② Week
- Available indication: 1st or 2nd
- Switchable with "8" (1ST/2ND).

③ Day
- Available indication: SU, MO, TU, WE, TH, FR, SA.
- Selectable with numeric keys "1" through "7".
- When daily serial recording is selected with "9" (DAILY), all days and "REPT" appear on the on-screen display; and all days and "REPEAT" appear on the FDP.

④ Repeat indicator
- For repeated execution of the preset program.
- Called up or cancelled with "0" (REPEAT).

ON-SCREEN



- "TU OFF" appears when the SOURCE SELECT switch is set to AUX; channel setting is not possible.

⑤ Start time
- Numeric key input.
- AM or PM switchable with "AM/PM".

⑥ Stop time
- Numeric key input.
- AM or PM switchable with "AM/PM".

⑦ Channel
- Numeric key input .
- If an invalid number is entered, the display is reset to "- -" after about 2 seconds.

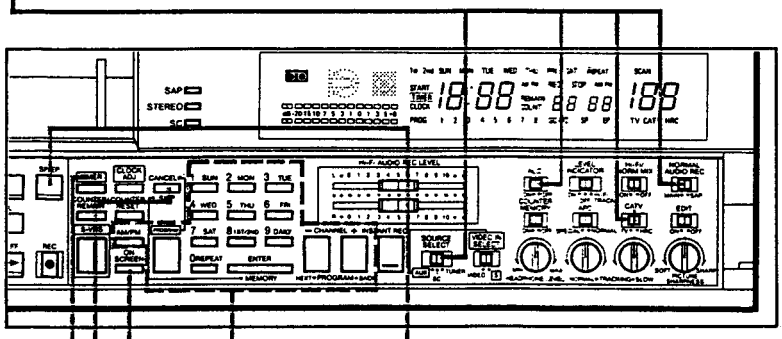
⑧ Recording mode
- Available indication: SP or EP
- Switchable with "SP/EP".

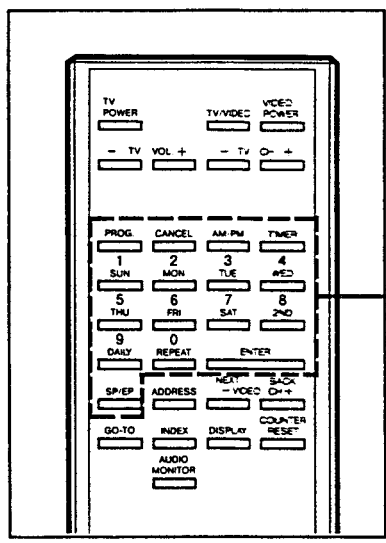
Timer Setting Procedure

First of all, load a cassette (with safety tab in place); power will be switched on automatically.

Make sure of the settings of these switches:
ALC: ON is recommended for unattended recording.
SOURCE SELECT: TUNER (or SC)
NORMAL AUDIO REC SELECT: As required.
TV/CATV/HRC: As required.

Basic steps in programming
- Data input is possible where the cursor (blinking position) is located.
- Set the data and press the ENTER button; the data will be stored in memory.





ON-SCREEN button

CANCEL button (see next page)

1 Press PROGRAM.
- The display will change to the Timer Set mode with "1" flashing. You are ready to enter the data into No. 1 program memory. To change the program number, press the PROGRAM button the required number of times or the numeric key corresponding to the desired program number.

2 If OK, press ENTER.

3 Key in the day, and press ENTER.
- To set for the 2nd week, press [8] either before or after setting the day.
- To set for weekly serial recording, press [0].
- To set for daily serial recording, press [9].

4 Key in the start time and press ENTER.
- To specify AM or PM, press AM/PM either before or after setting the time.
- Invalid time numbers will be rejected (see next page).

5 Key in the stop time and press ENTER.
- Specify AM or PM in the same way for the start time.

6 Key in the channel number and press ENTER.
- Invalid channel numbers will be rejected.

7 Specify the recording speed by pressing SP/EP and press ENTER.
- Program number will start blinking.
- Now you can advance to the next program, if necessary, by pressing the PROGRAM button.
- After all necessary programs have been preset, proceed to the next step.

8 Press TIMER.
- The TIMER indicator will light. (For error indications, see next page.)
- The display will return to the Clock mode, also showing the program numbers for which recording data has been programmed.

Variety of setting possibilities
- You can set for some day of the 1st week or the 2nd week.
- You can set for one day of every week by first setting that day of the 1st week and pressing the REPEAT [0] button.
- You can set for one day of every week starting from the second week by first setting that day of the 2nd week and pressing the REPEAT [0] button.
- You can set for all days for one week by pressing the DAILY [9] button and then the REPEAT [0] button (to cancel "REPEAT"). Recordings will be repeated at the same time everyday for one week.
- You can selectively set for any combination of days by first pressing the DAILY [9] button and then erasing unnecessary days with the corresponding numeric keys. "REPEAT" can be cancelled by pressing the REPEAT [0] button, if not necessary.
- You can set for all days week after week. For this setting, press the DAILY [9] button. And recordings will be made everyday at the same time week after week.
- All the above applies for all 8 program entries.

IMPORTANT INFORMATION ON TIMER RECORDING

Setting the timer

- Enter the data while the corresponding indication is flashing (about 60 seconds). If no command is entered within one minute, the display will return to the Clock mode.
- It is not possible to set the start and stop times unless the clock time has previously been set.
- The stop time can be set within 24 hours from the start time. The day indication will not change even if the stop time runs into the following day.
- The CHANNEL UP/DOWN BACK/NEXT (VIDEO CH on remote control) buttons can be used to move the cursor. Use this function to reach positions which require correction. Press NEXT to move the cursor forward; press BACK to move the cursor back.
- If an invalid number is entered in time setting, the entered data is cleared after 4 seconds and the display returns to a flashing "-:--". If you press the ENTER button before 4 seconds have elapsed, the invalid data is instantly detected and, in case of correct entry, the flashing position advances to the next; otherwise a flashing "-:--" will be displayed.

Last-channel memory

- The currectly tuned channel locks in the Timer Set mode and, when the display returns to the Clock mode, the locked channel is displayed.

Cancelling the preset data

- The preset programs can be cancelled by pressing the CANCEL button. For this purpose, first engage the Timer Set mode for the number you wish to cancel and then press the CANCEL button.

Checking the programmed data

- Checking and re-programming can be performed anytime, even when the TIMER button has already been engaged in the ON position.
- To check the programmed data, press the PROGRAM button. To return to the Clock mode, press the COUNTER/REMAIN button. The Clock mode will also be restored by pressing the PROGRAM button once after program number 8 is displayed. With the remote control, use the latter method.
- While recording is actually taking place, the stop time can be changed. Engage the Timer Set mode; only the stop time will flash. Re-program it.
- While recording is actually taking place according to one preset program, all other preset programs can be checked or re-programmed.

TIMER indicator (Error indication)

- When the TIMER button is pressed to ON with a cassette loaded and the timer correctly programmed, the TIMER indicator on the display will light with the corresponding preset program number(s) also lighting and the power is turned off.
- When you have preset several programs at a time, confirm that all the preset program numbers light together with the TIMER indicator when the TIMER button is pressed. The program whose number does not light has not been correctly preset (for instance, the preset switch-on and switch-off times are the same). Recheck the programmed data.
- If all programs have been wrongly preset, the TIMER indicator will blink for about 10 seconds when the TIMER button is pressed, and then remains lit with no program number lighting.
- If the TIMER button is pressed when a cassette is not loaded, the TIMER indicator will continue blinking.
- If a cassette with its safety tab removed has been loaded, it will be ejected automatically when the TIMER button is pressed. The TIMER indicator will continue blinking.

Timer operation

- Tape loading starts 20 seconds before the preset switch-on time and the recording start signal is triggered 2 seconds before the preset time so that recording starts exactly at the preset time.
- During timer recording, the number of the program that is presently operating will be flashing.
- After timer recording, the power is switched off and the auto-rewind mechanism does not function. If the end of the tape is reached during timer recording, the cassette is automatically ejected and then the power is switched off with the TIMER indicator blinking.
- If a power failure should occur (and last longer than about 10 minutes), not only time-keeping stops (see page 19), but also all the preset data will be cancelled. A flashing SUN AM 12:00 indicates this after power has been reapplied. In such cases, first correct the time indication and then re-enter the programming data.

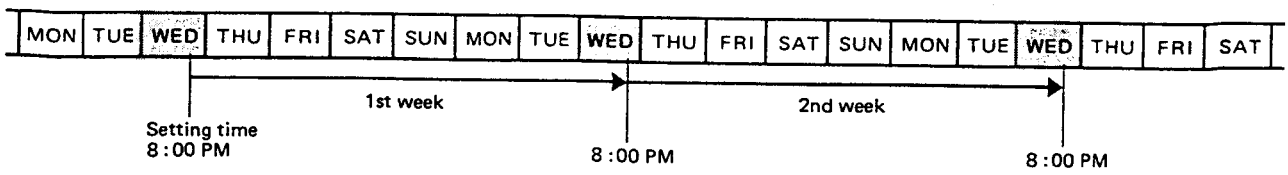
Program priority

- If you have preset two programs for the same day and the same start time, the setting corresponding to the smaller program number has priority.
- If two programs have preset times which overlap, the earlier-started program will be interrupted by the later one.

1ST/2ND and REPEAT buttons

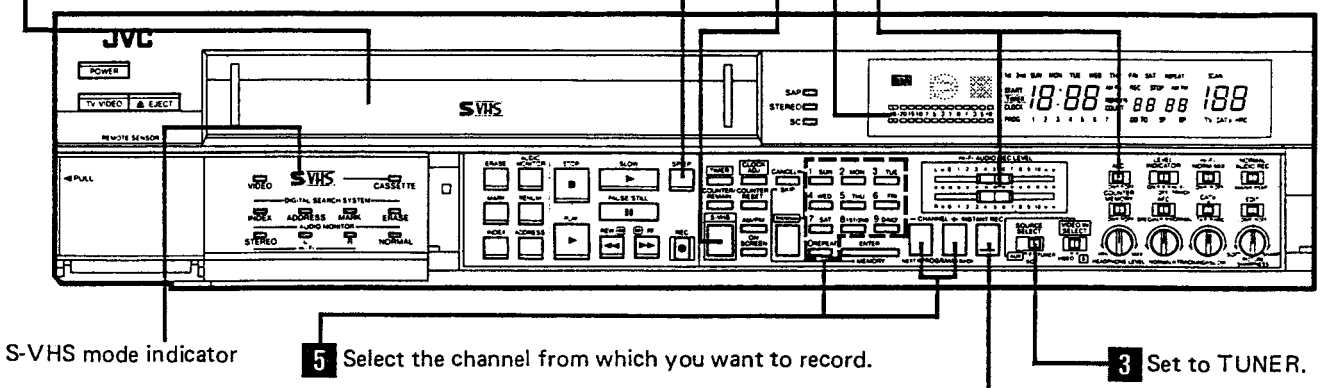
- During the day set mode (while the week and day indicators are flashing), it is possible to switch between 1st or 2nd week by pressing the 1ST/2ND [8] button or between single or weekly repeat (with "REPEAT" indicator on) by pressing the REPEAT [0] button.
- The 1st week or 2nd week do not refer to weeks on the calendar; the 1st week refers to the seven-day period from the present day and the 2nd week, to the following seven-day period. These two weeks are counted from the time of setting.

If the current day and time of setting are Wednesday, 8:00 PM:

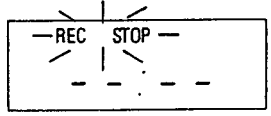

MON TUE WED THU FRI SAT SUN MON TUE WED THU FRI SAT SUN MON TUE WED THU FRI SAT
1st week
2nd week
Setting time
8:00 PM
8:00 PM
8:00 PM

INSTANT RECORDING

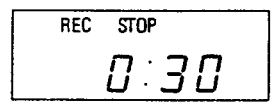
Besides starting and stopping a recording as usual, the HR-S7000U offers a more convenient possibility: starting by the push of a single button, with recording stopping automatically after a certain period of time. Use this facility for starting a recording just before you go to bed or leave home.


4 Set to either SP or EP.
2 For S-VHS recording, press S-VHS so the S-VHS indicator lights.
Audio level indicators
1 Load a cassette. Power will be switched on automatically.
6 Set the Hi-Fi audio recording level or set the ALC switch to ON. (Refer to page 17.)
JVC
S-VHS mode indicator
5 Select the channel from which you want to record.
3 Set to TUNER.

7 Press INSTANT REC.
- The following indication will appear on the display, to show that the recorder is ready to start recording.
- The REC STOP indicator on the display will flash.



8 Press INSTANT REC once again.
- Recording will begin immediately and the following indication will appear on the display, showing that recording will automatically stop and power will switch off after 30 minutes.
- The REC STOP indicator remains lit.



9 Each time the INSTANT REC button is pressed, recording time increases by 30 minutes.
- For a more precise time setting, use the numeric keys after recording has started. See notes below.

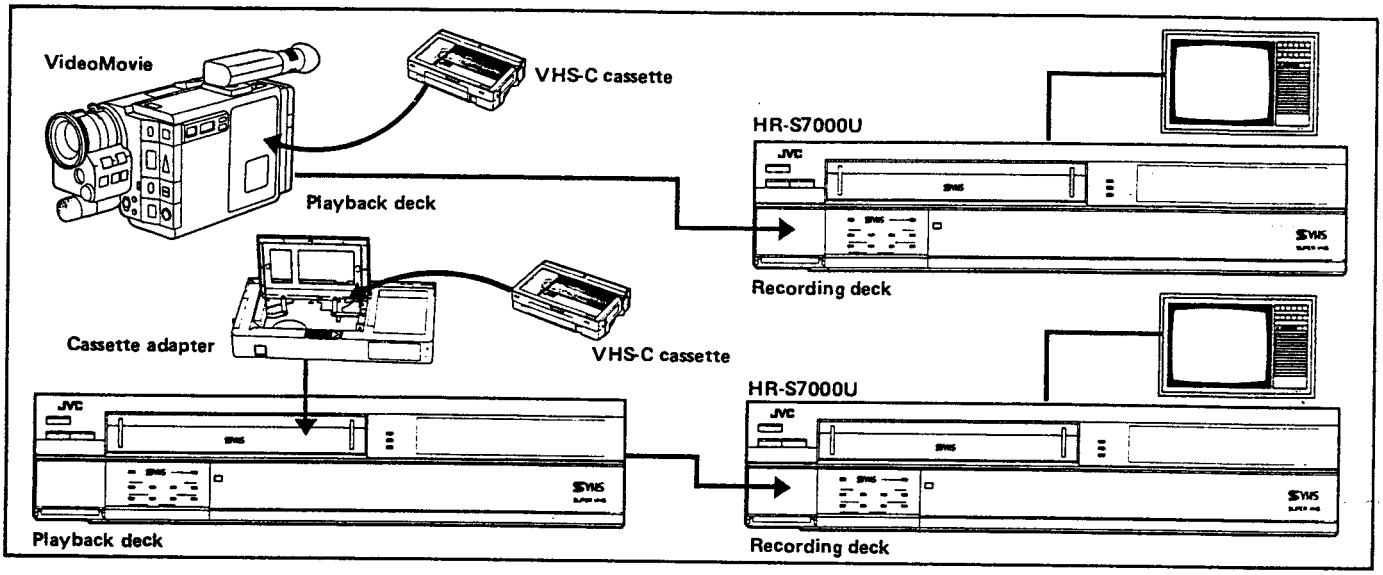
Notes:

- If the INSTANT REC button is not pressed a second time within about 10 seconds after it has been pressed once, the Instant Record mode will be cancelled and the display will change back to the Counter mode.
- Time setting in the Instant Record mode is possible up to a maximum of 4 hours when the INSTANT REC button only is used, or up to 8 hours 59 minutes if the numeric keys and ENTER button are used. For this purpose, after "0:30" has appeared, specify the time using the numeric keys and press the ENTER button immediately. (Always key in a full number including hours and minutes. For "0:35", key in zero first.)
- While recording is in progress, the displayed time counts down; when 0:00 is reached, the Record mode is released after about 10 seconds. The power will be switched off.
- If you want to stop recording after having started recording in the Instant Record mode, press the STOP button.
- The instant recording function can also be used as a sleep timer. If you press the INSTANT REC button during normal recording, the REC STOP indicator will light on the display and the indication "0:30" will be obtained, showing that recording will stop automatically after 30 minutes. The time span can be adjusted in the same way as for instant recording up to 8 hours 59 minutes.
- Instant recording has priority over all other modes; you can start recording from any mode using the INSTANT REC button, even from rewind or fast forward, or from power off (as long as the power cord is plugged in).
- If the INSTANT REC button is pressed with a non-recordable cassette loaded (one with its safety tab removed), the cassette will be automatically ejected.
- If you want to perform instant recording after you have set the timer and pressed the TIMER button, press the INSTANT REC button as usual. Power will be turned on and instant recording will start. After instant recording has been performed, the Timer mode is automatically re-entered and power is turned off. The preset time for instant recording has priority over the timer preset times. Before pressing the INSTANT REC button, make sure that the instant recording time will not eventually overlap the timer preset times.
- If the preset start time for a timer recording should come after the stop time of the instant recording, this timer recording will still be made automatically.

TAPE-TO-TAPE EDITING

VideoMovie recordings can be edited by using a VideoMovie camcorder (with playback facility) or a 2nd video deck.

Through use of a cassette adapter, VideoMovie recordings can be treated just like regular VHS cassettes.



- Connect the playback deck's VIDEO OUT and AUDIO OUT connectors (or the VideoMovie's AV OUT) to the recording deck's VIDEO IN and AUDIO IN connectors.
- Set the recording deck's SOURCE SELECT switch to AUX.
- Put the playback deck in the Play mode.
- Put the recording deck in the Record mode.

Notes:

- When using the HR-S7000U as a recording deck, use the convenient front panel AUDIO IN and VIDEO IN connectors for easy hookup. The front panel connectors have priority over the rear ones.
- For monaural audio connection, use the AUDIO IN L connector.

Tips for obtaining better results

The quality of the edited tape may vary depending on the position of the EDIT switch. It is recommended that you first make some trial recordings.

- With the EDIT switch of the playback deck set to ON and recording deck to OFF,
- With the EDIT switch of both playback and recording decks set to ON, and
- With the EDIT switch of both decks set to OFF.

Choose the setting combination that best suits your preference.

Note:

- Also refer to the instruction manual of the 2nd video recorder you are using.

RECORDING WITH A VIDEO CAMERA

Operation

1. Turn the power on for all connected equipment.
2. Adjust the TV receiver to your video channel.
3. Load a cassette.
4. Set the SOURCE SELECT switch to AUX.
5. Press the TV/VIDEO button to turn on the VIDEO indicator.
6. Set the SP/EP button as required.
7. Press the REC and then the PAUSE/STILL button.
   - The recorder enters the Recording Standby mode.
8. Operate the camera's start/stop switch.
   - Recording starts and stops with this switch.
9. To end the recording, press the STOP button.

Connection

To connect a video camera, an appropriate camera adapter is necessary.

- Connect the video camera to the camera adapter.
- Connect the camera adapter to the HR-S7000U: adapter's VIDEO OUT to recorder's VIDEO IN, adapter's AUDIO OUT to recorder's AUDIO IN, and adapter's PAUSE to recorder's REMOTE PAUSE.

For proper connection of a camera to the HR-S7000U, consult a JVC dealer.

Notes:

- If feedback noise (whistling or howling) is heard from the TV receiver, reduce the volume or move the camera's microphone, farther away from the TV receiver.
- For camera operation refer to the instruction manual for the relevant camera.

IN CASE OF DIFFICULTY

What may initially appear to be trouble is not always a real problem. Make sure first . . . .

POWER AND TAPE TRANSPORT PROBLEMS

Symptoms	Check points
No power is applied to the recorder.	• Is the power cord disconnected? – Connect it.
Clock is functioning properly, but the recorder cannot be powered.	• Is the TIMER indicator lit on the FDP? – Press the TIMER button to turn off the indicator.
Tape does not run during recording.	• Is the PAUSE/STILL button pressed to ON? – Press the PLAY button.
Tape stops in the Rewind or Fast Forward mode.	• Is the COUNTER MEMORY function engaged? – Set it to OFF.
Tape will not rewind or fast forward.	• Is the tape already fully rewound or fast forwarded? – Check the cassette.

RECORDING PROBLEMS

Symptoms	Check points
Recording cannot be started.	• Is a cassette loaded? • Is the safety tab on the cassette removed? – Reseal the slot with cellophane tape.
TV broadcasts cannot be recorded.	• Is the SOURCE SELECT switch set to AUX? – Set it to TUNER.
Camera recording is not possible.	• Are the camera and the camera adapter correctly connected? • Is the power switch of the camera adapter set to ON? • Is the SOURCE SELECT switch set to a position other than AUX? – Set it to AUX.
Simulcast recording is not possible.	• Is the SOURCE SELECT switch set to a position other than SC? – Set it to SC. • Is an audio source correctly connected to the AUDIO IN connectors? – Check connections.
Timer recording is not possible.	• Have you set the clock correctly and programmed the timer correctly? – Check once again. • Is the TIMER indicator lit on the FDP? – If not, press the TIMER button to light the indicator.

PLAYBACK PROBLEMS

Symptoms	Check points
Playback picture does not appear while the tape is running.	• Is the TV receiver's channel selector set to the correct video channel? – Set it to the RF converter channel (3 or 4). (See page 10.)
Noise appears on the search and still pictures.	• This is normal.
Noise appears during playback.	• Adjust the TRACKING controls.
Playback picture is blurred or interrupted while TV broadcasts are clear.	• Video heads may be dirty. – Head cleaning is necessary. Consult your nearest JVC dealer.

HI-FI AUDIO PROBLEMS

Symptoms	Check points
TV sound cannot be recorded on hi-fi audio tracks.	• Is the SOURCE SELECT switch set to SC? – Set it to TUNER.
Breaks are noticeable in hi-fi audio reproduction.	• Adjust with the NORMAL TRACKING control. (See page 17.)
Soundtrack on the hi-fi audio track cannot be reproduced.	• Is the AUDIO MONITOR select button set to NORMAL? – Set it to Hi-Fi STEREO.
Audio level indicators do not function.	• Is the LEVEL INDICATOR switch set to OFF? – Set it to ON.

OTHERS

Symptoms	Check points
Whistling or howling is heard from TV during camera recording.	• Move camera's microphone away from TV or reduce TV sound volume.
Clock setting is not possible.	• Is the TIMER indicator lit on the FDP? – Press the TIMER button to turn off the indicator.
Some channels are skipped over when scanning channels.	• Those channels are preset to be skipped over. If you need them, restore them. (See page 14.)
Channel cannot be switched.	• Is recording in progress? – Press the PAUSE/STILL button, select a desired channel and press the PLAY button.
Snowy picture on screen when viewing TV programs while recording another program.	• Is the VIDEO indicator lit? – Press the TV/VIDEO button so that the indicator extinguishes.

This recorder contains microcomputers. External electronic noise or interference could cause malfunctioning. In such cases, switch the power off and unplug the power cord. After a few minutes, plug it in again and switch on. Take out the cassette. After checking the cassette, operate the unit as usual.

HEAD CLEANING

- Picture playback may become blurred or interrupted while the TV program received is clear. This does not mean that the recorded program has been erased.
- Dirt accumulated on the video heads after long periods of use causes such troubles. In this case, head cleaning requiring highly technical care is necessary.

* For head cleaning, consult the nearest JVC dealer.

SPECIFICATIONS

Format	: S-VHS/VHS NTSC standard with Hi-Fi audio
Video recording system	: Rotary, two-head helical scan system with slant double-azimuth combination video heads
Hi-Fi audio recording system	: Deep-layer recording system conforming to stereo Hi-Fi VHS standard
No. of audio channels	: 2 Hi-Fi audio channels 1 normal audio channel
Video signal system	: NTSC-type color signal and separated Y/C signals conforming to NTSC
Tape width	: 12.65 mm (1/2 inch)
Tape speed	
(SP)	: 33.35 mm/s (1-5/16 ips)
(EP)	: 11.12 mm/s (7/16 ips)
Maximum recording time	
(SP)	: 160 min. with T-160 video cassette
(EP)	: 480 min. with T-160 video cassette
Temperature	
Operating	: 5°C to 40°C (41°F to 104°F)
Storage	: -20°C to 60°C (-4°F to 140°F)
Humidity	
Operating	: 35 % to 80 %
Storage	: 5 % to 80 %
Antenna	: 75 ohms, unbalanced
Channel coverage	
(VHF)	: Channels 2 – 13
(UHF)	: Channels 14 – 69
(CATV)	: 113 channels
RF output signal	: Channel 3 or 4 (switchable; preset to channel 3 when shipped) 75 ohms, unbalanced
Power requirement	: AC 120 V∿, 60 Hz
Power consumption	: 41 W
Video	
Input	: 0.5 to 2.0 Vp-p, 75 ohms, unbalanced
Output	: 1.0 Vp-p, 75 ohms, unbalanced
Signal-to-noise ratio	: 45 dB (Rohde & Schwarz noise meter) with PICTURE SHARPNESS control at center position
Horizontal resolution	: More than 400 lines (S-VHS)/ 240 lines (VHS) with PICTURE SHARPNESS control at center position

Audio	
Input	: -8 dBs, more than 50 k-ohms, unbalanced
Output level	: -6 dBs, high impedance load
Output impedance	: Less than 1 k-ohm, unbalanced
Signal-to-noise ratio	: More than 40 dB (Normal audio)
Frequency range	: 70 Hz to 10,000 Hz (Normal audio)
Hi-Fi audio	
Frequency response	: 20 Hz to 20,000 Hz
Dynamic range	: More than 90 dB
Wow and flutter	: Less than 0.005 % WRMS
Timer	: 14-day programmable timer 8 programs with repeat function
Dimensions	: 435 mm(W) x 95 mm(H) x 337 mm(D) (17-3/16" x 3-3/4" x 13-5/16")
Weight	: 8.6 kg (18.9 lbs)
Provided accessories	: Infrared remote control unit "AAA"-size battery x 2 Audio cable Video cable S-VIDEO cable (4-pin) Matching transformer Antenna splitter Antenna cable (F-type) S-VHS cassette tape

Specifications shown are for SP mode unless otherwise specified.
Design and specifications subject to change without notice.